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Electric Power Supply and Demand

1982-1991

Annual Data Summary Report for the Regional Reliability Councils of NERC

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North American Electric Reliability Council
Research Park, Terhune Road ☐ Princeton, NJ 08540 ☐ (609) 924-6050

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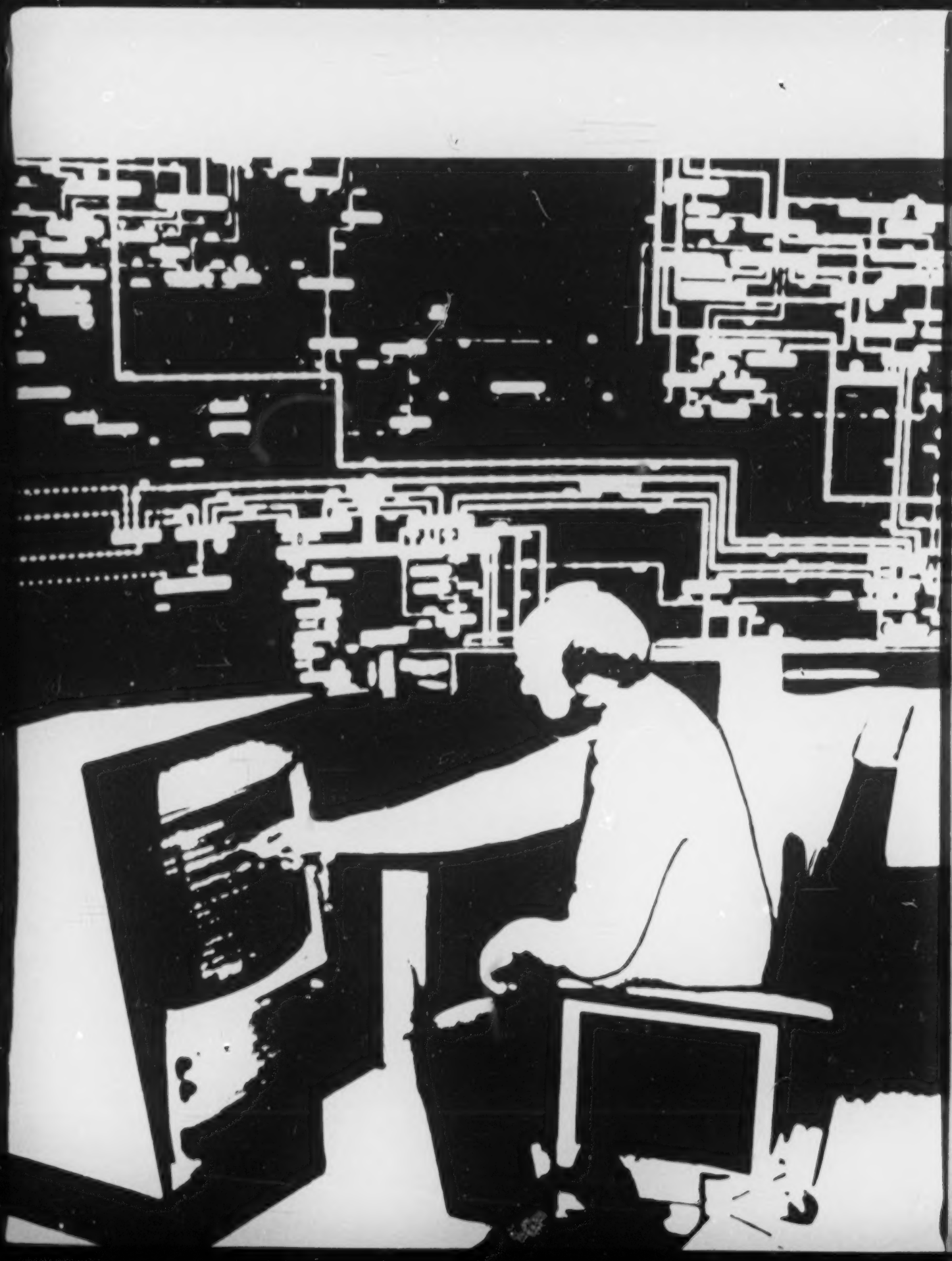
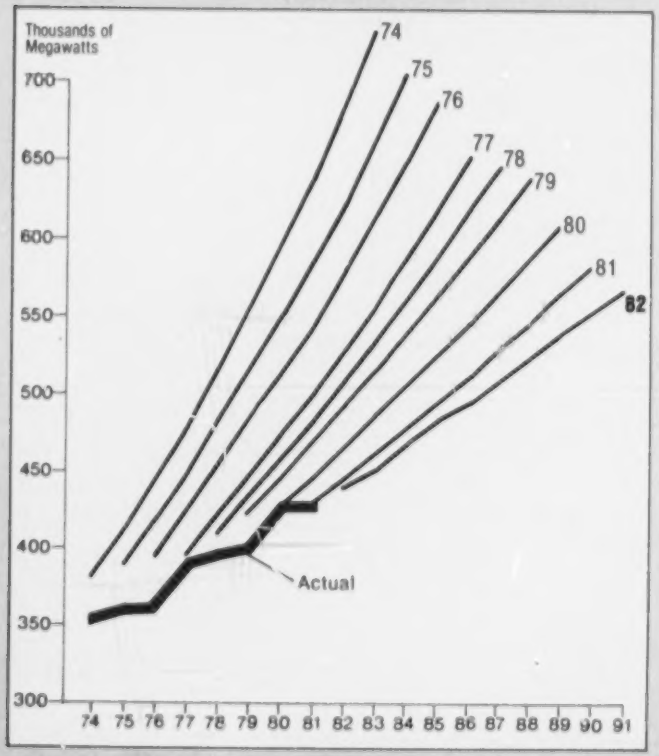


Highlights

CONTIGUOUS U.S.	1982	1991	1982-1991
Projected Summer Peak Demand (MW)	438,086	569,140	—
Summer/Winter Peak Demand Ratios	108.5%	107.0%	—
Summer Peak Demand Average Annual Growth Rate	—	—	3.0%
Net Electrical Energy Requirements (10^6 kWh)	2,385,202	3,180,947	—
Annual Load Factors	62.2%	63.8%	—
Net Energy Average Annual Growth Rate	—	—	3.3%
Scheduled New Coal-fired Generating Units	—	—	174 (91GW)
Scheduled New Nuclear Generating Units	—	—	61 (66GW)
Scheduled Oil-To-Coal Unit Conversions	—	—	67 (10GW)

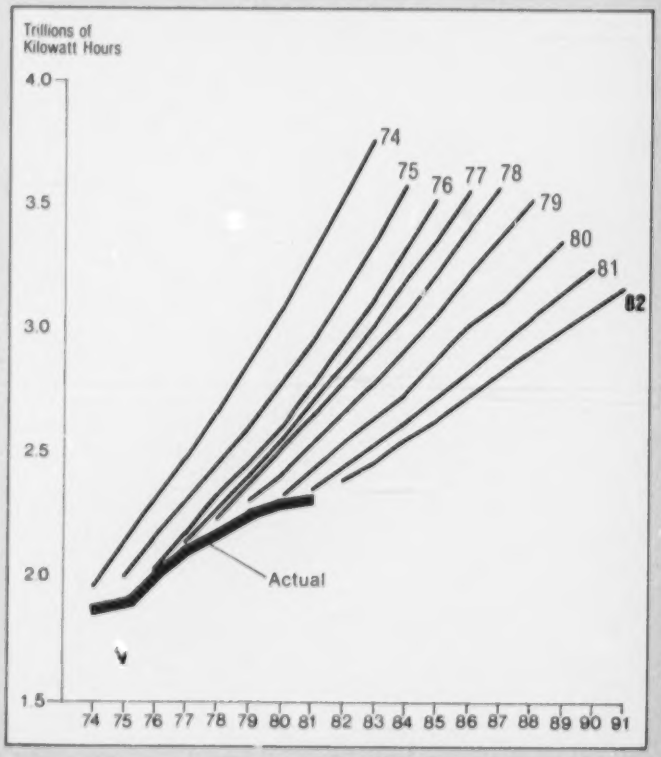
Projected ten-year growth continues to slow...

Summer Peak Demand Projections
Comparison of Annual Ten-Year Forecasts
(Contiguous U.S.)



average annual growth rate (%) projecting ten years
1974 — 7.6
1975 — 6.9
1976 — 6.4
1977 — 5.7
1978 — 5.2
1979 — 4.7
1980 — 4.0
1981 — 3.4
1982 — 3.0

Net Energy Projections
Comparison of Annual Ten-Year Forecasts
(Contiguous U.S.)



average annual growth rate (%) projecting ten years
1974 — 7.5
1975 — 6.7
1976 — 6.3
1977 — 5.8
1978 — 5.3
1979 — 4.8
1980 — 4.1
1981 — 3.7
1982 — 3.3

Introduction

About NERC

The North American Electric Reliability Council (NERC) was formed by the electric utility industry in 1968 and incorporated in 1975 to promote the reliability and adequacy of bulk electric power supply in North America.

NERC's nine regional reliability councils comprise virtually all of the electric utility systems in the United States and Canada. The regional identifications and geographic boundaries are shown on the map inside the front cover.

The governing body of NERC is its Board of Trustees, consisting of two representatives from each regional council, plus such additional representatives as prescribed in the By-Laws. There must always be at least one representative on the Board from a Canadian utility system and at least two utility representatives from each segment of the electric utility industry: Investor-owned, Federal, Rural Electric Cooperative, and State/Municipal.

Meetings of the Board are attended by observers from the United States Department of Energy and from the Canadian National Energy Board. Representatives of the Edison Electric Institute, American Public Power Association and the National Rural Electric Cooperative Association also attend as observers.

NERC was created with the formation of an active committee structure, spanning the existing regional utility organizations, providing an industry forum and mechanism for coordination. This committee structure, requiring the cooperation of hundreds in the industry, is coordinated and supported by the NERC staff located in Princeton, New Jersey.

About this Report

One of the major activities of NERC is the annual compilation and publication of utility forecasts relating to electric power supply and demand. This *Electric Power Supply and Demand* report is designed to provide this data in a concise and useful format to satisfy the needs of a wide variety of industry audiences.

The projections summarized in this report are not constructions of NERC, but rather are aggregations of projections developed early in 1982 by the individual utility members of each regional reliability council.

The data on projected peak demand and planned resources for 1982-2001, and on planned additions of generating units, have been extracted from the April 1, 1982 Coordinated Bulk Power Supply Program (EP-411) reports submitted to the United States Department of Energy (DOE) by each of the nine regional reliability councils.

The data on 1981-1991 generating capability, net electric energy generation, fossil fuel requirements, planned conversions of units to coal-firing, planned additions of transmission lines, and 1981 actual peak demand are reported directly to NERC by the regional reliability councils.

Derivations of data compiled in the other tables of this report are described where necessary in the text accompanying each table.

It is to be understood that this report provides projections, not predictions, at a given point in time. Uncertainties exist. Changing circumstances may vitiate certain assumptions underlying these projections. The most consequential of these uncertainties are:

1. Unanticipated factors affecting future growth of peak demand and energy requirements.
2. The uncertainties associated with the schedules of generating units presently under construction or planned for the future.
3. Unanticipated regulatory restrictions which may affect the operation of existing generating units.
4. Future constraints on fuel availability or use beyond those recognized at the time the projections were prepared.

The unique value of the NERC summary of projections is that it reflects the collective perceptions and plans of the individual utilities who are in the best position at any one time to understand the particular conditions and trends affecting the requirements of their customers.

To more accurately reflect its geographic membership, in 1981 NERC members approved a name change from *National* to *North American* Electric Reliability Council, retaining the acronym, NERC. In accordance with this name change, this year's report tables have been expanded to include all data available from NERC's Canadian membership.

The data found in the tables of this report have been summarized by NERC regions. Data for the MAIN, NPCC, SERC, SPP, and WSCC regions are also sorted by their subregions and presented in subregional tables following each corresponding regional table. The following subregional abbreviations have been used throughout:

Region	Subregional Abbreviation	Subregional Description
MAIN	Cmnwlth Ed.	Commonwealth Edison Company
	Missouri	Missouri Group
	So. Cent. Ill.	South Central Illinois Group
	WUMS	Wisconsin-Upper Michigan Systems Group
NPCC	New York	New York State
	New England	New England
	New Brunswick	New Brunswick Electric Power Commission
	Ontario	Ontario Hydro
	Québec	Hydro-Québec
SERC	Florida	Florida Subregion
	Southern	Southern Companies Subregion
	TVA	Tennessee Valley Subregion
	VACAR	Virginia-Carolinas Subregion
SPP	Group A	Arkansas-Louisiana-Mississippi Area
	Group B	Oklahoma Area
	Group C	Missouri-Kansas Area
WSCC	NWPP	Northwest Power Pool Area
	RMPA	Rocky Mountain Power Area
	AZ-NM	Arizona-New Mexico Power Area
	CA-NV	California-Nevada Power Area

Throughout this report, where seasons are designated, SUMMER is defined as that period of the year between June 1 and September 30; WINTER is defined as that period between December 1 and March 31. Appropriate footnotes have been included.

Questions or comments on this report should be directed to:

Blaine Vincent, Jr.
North American Electric Reliability Council
Research Park, Terhune Road
Princeton, NJ 08540
(609) 924-6050

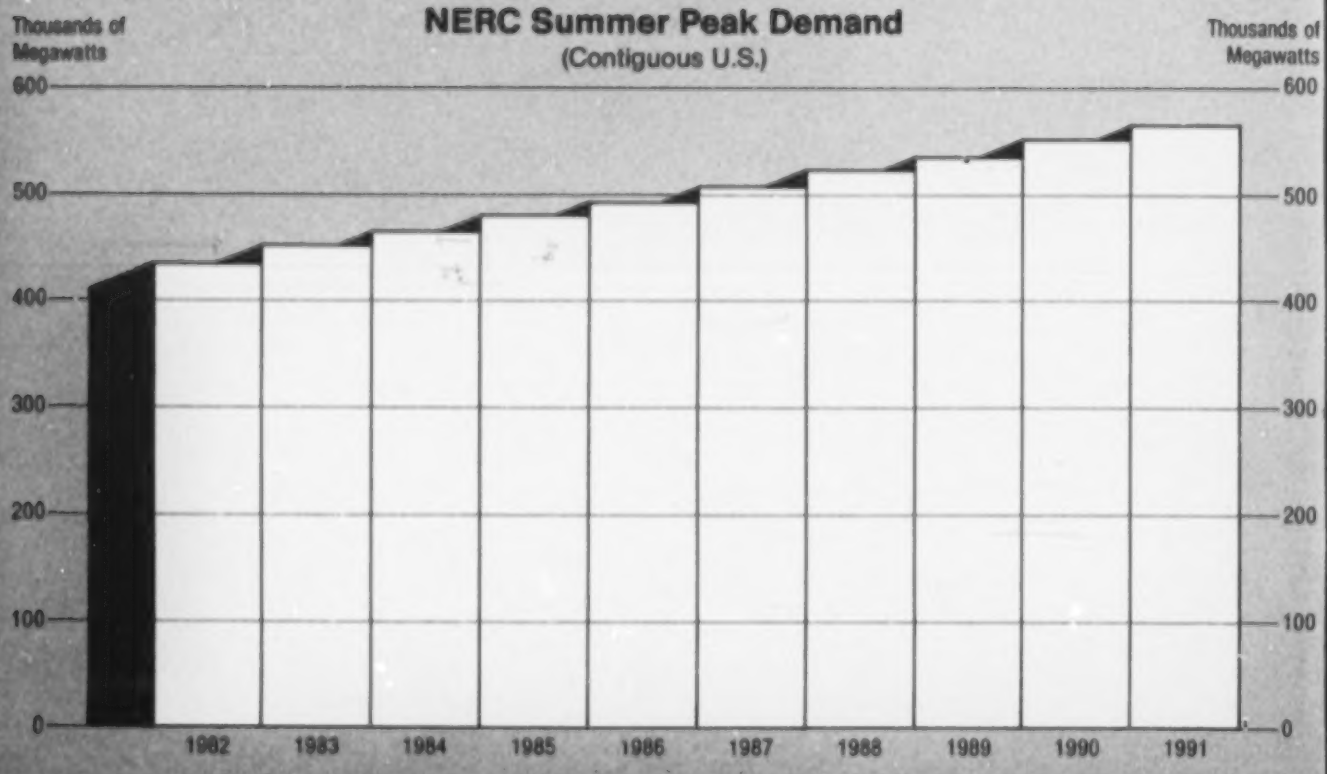
Projected Peak Demand

Projected Peak Demand data represent actual and forecast peak hour demands, less demands which are interruptible by contract.

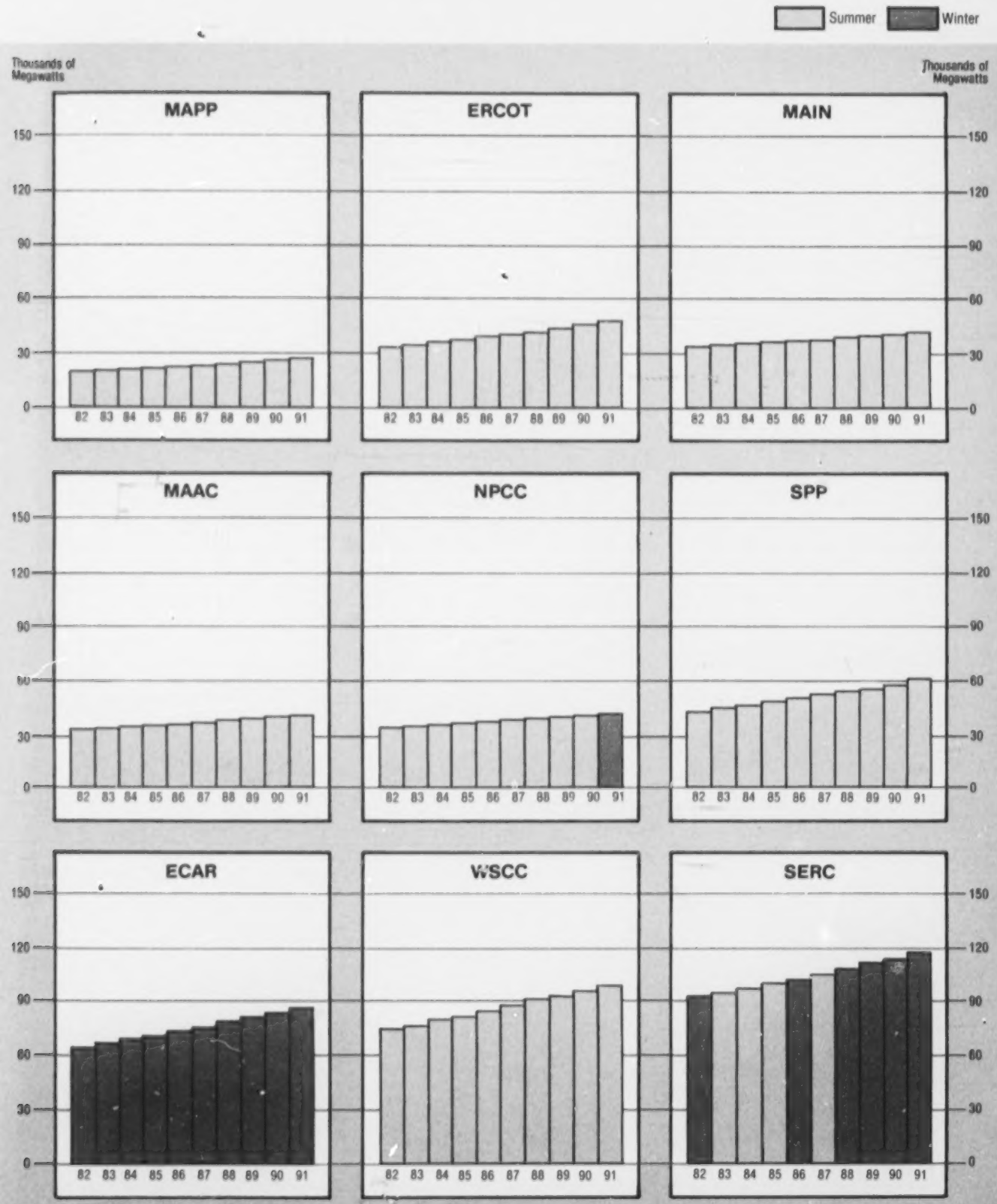
Peak demands as tabulated for the various NERC Regions may occur in different months within a given season. NERC totals, therefore, represent aggregations of non-coincident regional peak demands.

Utilities are forecasting summer peak demands for 1982-1991 which, in the aggregate for the U.S., result in an average annual growth rate of 3.0%. Last year's projected average annual growth rate for the 1981-1990 period was 3.4%.

This decline of 0.4% in the average annual growth rate, combined with the fact that this year's prediction for 1982 (438,086 MW) is only slightly above last year's prediction for 1981 (430,398 MW), results in an approximate two-year slippage in projected peak demand by the 10th year. That is, this year's projection for 1991 (569,140 MW) approximates last year's projection for 1989 (564,933 MW).



Regional Peak Demands
(contiguous U.S.)



Regional: Projected Peak Demands — MW — Summer

TABLE 1

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	64,158	64,234	67,080	70,134	72,118	74,218	76,360	79,223	81,715	83,691	86,155
ERCOT	32,535	34,027	35,389	36,755	38,304	40,163	41,939	43,722	45,547	47,249	49,297
MAAC	33,633	34,465	35,175	35,985	36,695	37,385	37,945	38,695	39,445	40,205	40,915
MAIN	32,541	34,289	35,137	36,035	36,867	37,622	38,419	39,249	40,123	41,019	41,892
MAPP—U.S.	18,995	20,498	21,423	22,322	23,217	23,954	24,683	25,466	26,196	26,996	27,802
NPCC—U.S.	35,640	35,764	36,364	36,984	37,574	38,314	39,224	40,054	40,894	41,674	42,484
SERC	90,312	91,312	93,288	97,797	100,463	102,977	106,058	109,121	112,218	115,763	119,248
SPP	44,623	45,221	47,117	48,831	50,710	52,530	54,287	56,071	57,860	59,692	61,496
WSCC—U.S.	78,688	78,028	79,482	81,867	84,368	86,883	89,561	92,390	94,932	97,482	99,979
NERC—U.S.	429,693	438,086	452,447	466,910	480,916	494,010	508,676	523,991	538,922	553,931	569,148
MAPP—Canada	3,459	3,532	3,646	3,821	3,993	4,292	4,397	4,547	4,692	4,848	4,998
NPCC—Canada	27,264	29,067	29,317	30,600	32,000	33,970	35,399	36,881	38,474	40,448	42,265
WSCC—Canada	8,651	8,764	9,282	9,995	10,632	11,334	11,946	12,250	12,760	13,243	13,808
NERC—Total	467,069	479,469	494,712	510,926	527,141	543,566	560,318	577,669	594,848	612,470	630,211

Subregional: Projected Peak Demands — MW — Summer

TABLE 1S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	13,346	14,788	15,162	15,563	15,994	16,186	16,487	16,789	17,111	17,463	17,814
Missouri	6,651	6,818	6,339	6,474	6,606	6,749	6,874	7,018	7,163	7,307	7,452
So. Cent. Ill.	6,493	6,587	6,798	7,012	7,211	7,371	7,586	7,741	7,957	8,207	8,419
WUMS	6,681	6,788	6,898	7,046	7,246	7,465	7,552	7,711	7,892	8,042	8,208
MAIN	32,541	34,289	35,137	36,035	36,867	37,622	38,419	39,249	40,123	41,019	41,892
New York	21,291	21,294	21,344	21,824	22,174	22,344	23,004	23,414	23,774	24,134	24,494
New England	14,389	14,510	14,800	15,060	15,400	15,770	16,220	16,640	17,120	17,540	17,920
NPCC—U.S.	35,640	35,764	36,364	36,884	37,574	38,314	39,224	40,054	40,894	41,674	42,484
New Brunswick	1,098	1,268	1,317	1,364	1,408	1,452	1,499	1,538	1,582	1,626	1,670
Ontario	14,394	14,529	14,525	14,944	15,461	16,001	16,364	16,744	17,162	17,903	18,445
Québec	11,572	12,768	13,475	14,292	15,131	16,517	17,540	18,599	19,730	20,919	22,150
NPCC—Canada	27,264	29,067	29,317	30,600	32,000	33,970	35,399	36,881	38,474	40,448	42,265
Florida	19,430	19,899	19,517	20,370	21,089	21,649	22,217	22,743	23,308	24,026	24,688
Southern	22,665	21,988	22,392	23,166	23,844	24,600	25,574	26,415	27,177	28,137	29,128
TVA	19,495	20,537	22,196	22,395	22,649	22,921	23,366	23,854	24,374	24,997	25,609
VACAR	29,913	30,176	31,213	31,972	32,968	33,887	34,901	36,109	37,351	38,623	39,821
SERC	90,513	91,312	95,288	97,797	100,463	102,977	106,058	109,121	112,218	115,763	119,248
Group A	20,265	19,891	20,997	21,990	22,489	23,322	24,069	24,813	25,574	26,396	27,210
Group B	14,944	14,487	14,901	15,470	16,021	16,589	17,180	17,804	18,466	19,130	19,840
Group C	10,312	10,963	11,359	11,771	12,208	12,619	13,038	13,454	13,878	14,316	14,746
SPP	44,623	45,221	47,117	48,831	50,710	52,530	54,287	56,071	57,860	59,692	61,496
NWPP—U.S.	23,191	25,004	25,957	26,478	27,360	28,199	29,389	30,196	31,011	31,805	32,591
RMPA	5,302	5,581	6,002	6,304	6,737	7,146	7,556	7,968	8,333	9,610	9,945
AZ-NM	8,956	9,293	9,711	10,142	10,699	11,145	11,721	12,305	12,866	13,418	13,919
CA-NV	39,976	38,995	39,813	39,599	40,202	40,629	41,513	42,396	43,172	44,111	44,925
WSCC—U.S.*	78,688	78,028	79,482	81,867	84,368	86,883	89,561	92,390	94,932	97,482	99,979

Regional: Projected Peak Demands — MW — Winter

TABLE 2

Region	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	63,188	65,278	69,629	70,861	72,781	75,226	77,892	80,589	82,780	85,139	87,548
ERCOT	25,393	25,585	26,643	27,902	29,103	30,273	31,718	33,076	34,474	36,090	37,779
MAAC	30,726	30,595	31,435	32,415	33,385	34,275	35,205	36,185	37,135	38,105	39,065
MAIN	26,965	28,013	28,949	29,877	30,807	31,709	32,670	33,614	34,543	35,562	36,532
MAPP—U.S.	17,508	18,399	19,199	20,110	20,781	21,434	22,069	22,762	23,482	24,299	25,099
NPCC—U.S.	35,199	35,280	35,760	36,360	37,120	37,910	38,850	39,730	40,720	41,650	42,540
SERC	93,348	92,187	94,786	97,694	100,413	103,178	106,052	109,207	112,451	115,913	119,315
SPP	32,087	33,587	34,895	36,221	37,651	38,985	40,286	41,676	43,120	44,625	46,146
WSCC—U.S.	66,692	74,836	77,159	79,815	82,630	85,880	88,719	91,634	94,032	96,538	97,770
NERC—U.S.	391,106	403,760	417,455	431,255	444,671	458,870	473,461	488,473	502,737	517,921	531,794
MAPP—Canada	4,465	4,631	4,845	5,067	5,393	5,592	5,802	5,998	6,185	6,404	6,587
NPCC—Canada	38,324	40,050	42,169	44,394	46,739	48,962	51,281	53,660	56,057	58,486	61,096
WSCC—Canada	10,060	11,289	12,163	13,037	13,872	14,684	15,366	15,939	16,541	17,186	17,905
NERC—Total	443,955	459,730	476,632	493,753	510,675	528,108	545,910	564,070	581,520	599,997	617,382

Subregional: Projected Peak Demands — MW — Winter

TABLE 2S

Subregion	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	10,913	11,249	11,480	11,711	11,942	12,184	12,425	12,676	12,927	13,189	13,450
Missouri	4,362	4,565	4,812	5,065	5,309	5,553	5,797	6,051	6,316	6,580	6,845
So. Cent. Ill.	5,379	5,615	5,857	6,068	6,289	6,498	6,761	6,984	7,184	7,483	7,713
WUMS	6,311	6,504	6,800	7,033	7,267	7,474	7,687	7,903	8,116	8,310	8,524
MAIN	26,965	28,013	28,949	29,877	30,807	31,709	32,670	33,614	34,543	35,562	36,532
New York	19,551	19,660	19,880	20,240	20,670	21,060	21,530	21,940	22,370	22,800	23,220
New England	15,648	15,620	15,880	16,120	16,450	16,850	17,320	17,790	18,350	18,850	19,320
NPCC—U.S.	35,199	35,280	35,760	36,360	37,120	37,910	38,850	39,730	40,720	41,650	42,540
New Brunswick	1,553	1,690	1,754	1,815	1,872	1,930	1,988	2,045	2,102	2,160	2,220
Ontario	17,606	17,460	18,075	18,699	19,347	19,832	20,323	20,865	21,435	22,026	22,806
Québec	19,165	20,900	22,340	23,880	25,520	27,200	28,970	30,750	32,520	34,300	36,070
NPCC—Canada	38,324	40,050	42,169	44,394	46,739	48,962	51,281	53,660	56,057	58,486	61,096
Florida	21,050	21,367	22,000	22,636	23,372	24,012	24,676	25,346	26,184	27,182	27,812
Southern	19,166	18,638	19,357	20,038	20,707	21,441	22,194	22,995	23,664	24,510	25,330
TVA	22,478	22,136	22,627	23,032	23,179	23,529	23,863	24,284	24,742	25,224	25,917
VACAR	30,654	30,054	30,802	31,988	33,075	34,196	35,319	36,582	37,861	38,997	40,256
SERC	93,348	92,187	94,786	97,694	100,413	103,178	106,052	109,207	112,451	115,913	119,315
Group A	14,603	15,239	15,755	16,403	16,999	17,548	18,088	18,629	19,210	19,787	20,412
Group B	9,810	10,389	10,782	11,146	11,536	11,984	12,400	12,906	13,416	13,925	14,456
Group C	7,674	7,959	8,358	8,672	9,116	9,453	9,798	10,141	10,494	10,913	11,278
SPP	32,087	33,587	34,895	36,221	37,651	38,985	40,286	41,676	43,120	44,625	46,146
NWPP—U.S.	27,194	33,092	34,267	35,555	36,715	37,964	39,323	40,436	41,585	42,712	42,651
RMPA	5,146	5,632	5,961	6,311	6,741	7,144	7,443	7,923	8,218	8,536	8,713
AZ-NM	5,696	6,691	6,987	7,388	7,719	8,111	8,529	8,954	9,344	9,732	10,062
CA-NV	28,462	30,124	30,578	30,809	31,455	32,661	33,424	34,321	35,031	35,625	36,344
WSCC—U.S.*	66,692	74,836	77,159	79,815	82,630	85,880	88,719	91,634	94,032	96,538	97,770

Regional: Projected Peak Demands for 11 to 20 Year Period — MW [b,c]

TABLE 3

Region	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ECAR	91,000	93,500	96,100	98,800	101,500	104,100	106,900	109,700	112,500	115,500
ERCOT	51,031	53,192	55,148	57,176	59,275	61,543	63,890	66,230	68,617	71,136
MAAC	41,625	42,345	43,055	43,755	44,455	45,175	45,815	46,485	47,145	47,815
MAIN	43,476	44,440	45,419	46,468	47,542	48,648	49,759	50,871	52,213	53,447
MAPP—U.S.	28,834	29,672	30,534	31,399	32,359	33,362	34,378	35,423	36,485	37,603
NPCC—U.S.	44,890	45,690	46,520	47,220	48,070	48,760	49,610	50,420	51,150	51,890
SERC	128,782	133,103	137,323	141,841	146,273	150,847	155,619	160,505	165,713	170,968
SPP	63,472	65,381	67,403	69,530	71,755	74,080	76,492	78,981	81,563	84,303
WSCC—U.S.	102,998	105,436	107,999	110,632	113,376	116,204	119,281	122,262	125,377	128,637
NERC—U.S.	596,108	612,759	629,501	646,821	664,605	682,719	701,744	720,877	740,763	761,299
MAPP—Canada	6,885	7,062	7,229	7,439	7,639	7,816	7,978	8,156	8,328	8,510
NPCC—Canada	66,467	69,411	72,475	75,614	78,688	81,802	84,901	87,860	90,740	93,610
WSCC—Canada	19,318	20,153	21,012	22,025	22,960	23,824	24,832	25,789	26,725	27,699
NERC—Total	688,778	709,385	730,217	751,899	773,892	796,161	819,455	842,682	866,556	891,118

Subregional: Projected Peak Demands for 11 to 20 Year Period — MW [b,c]

TABLE 3S

Subregion	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Cmwlth Ed.	18,168	18,520	18,871	19,273	19,675	20,077	20,478	20,880	21,281	21,682
Missouri	7,657	7,832	8,027	8,232	8,448	8,683	8,930	9,165	9,631	9,968
So. Cent. Ill.	8,681	8,892	9,105	9,329	9,560	9,792	10,029	10,272	10,520	10,772
WUMS	8,970	9,196	9,416	9,634	9,859	10,096	10,322	10,554	10,781	11,025
MAIN	43,476	44,440	45,419	46,468	47,542	48,648	49,759	50,871	52,213	53,447
New York	25,070	25,470	25,920	26,330	26,760	27,180	27,660	28,190	28,690	29,200
New England	19,820	20,220	20,600	20,890	21,310	21,580	21,950	22,230	22,460	22,690
NPCC—U.S.	44,890	45,690	46,520	47,220	48,070	48,760	49,610	50,420	51,150	51,890
New Brunswick	2,220	2,281	2,343	2,406	2,469	2,534	2,600	2,668	2,738	2,810
Ontario	25,247	26,030	26,832	27,608	28,319	28,968	29,601	30,192	30,790	31,400
Québec	39,000	41,100	43,300	45,600	47,900	50,300	52,700	55,000	57,212	59,400
NPCC—Canada	66,467	69,411	72,475	75,614	78,688	81,802	84,901	87,860	90,740	93,610
Florida	29,527	30,349	31,343	32,368	33,277	34,232	35,235	36,250	37,312	38,439
Southern	30,320	31,317	32,316	33,346	34,383	35,468	36,590	37,722	38,925	40,167
TVA	26,360	27,210	28,095	28,958	29,731	30,516	31,353	32,228	33,269	34,191
VACAR	42,575	44,027	45,569	47,169	48,882	50,631	52,441	54,305	56,207	58,171
SERC	128,782	133,103	137,323	141,841	146,273	150,847	155,619	160,505	165,713	170,968
Group A	28,153	28,999	29,910	30,867	31,850	32,862	33,906	34,984	36,096	37,203
Group B	19,947	20,532	21,145	21,783	22,474	23,196	23,954	24,730	25,525	26,338
Group C	15,372	15,850	16,348	16,880	17,431	18,022	18,632	19,267	19,942	20,762
SPP	63,472	65,381	67,403	69,530	71,755	74,080	76,492	78,981	81,563	84,303
NWPP—U.S.	43,618	44,685	45,801	46,918	48,083	49,309	50,598	51,895	53,291	54,780
RMPA	9,314	9,684	10,158	10,490	11,057	11,517	11,993	12,482	12,997	13,531
AZ-NM	14,852	15,365	15,874	16,409	16,904	17,442	18,009	18,569	19,130	19,724
CA-NV	46,514	47,361	48,239	49,215	50,252	51,355	52,534	53,654	54,815	56,026
WSCC—U.S. [a]	102,998	105,436	107,999	110,632	113,376	116,204	119,281	122,262	125,377	128,637

Footnotes

a/ Since the subregional peak demands may occur in different months than the coincidental total WSCC (U.S.) peak demand, the sum of the individual suregional peak demands may not equal the WSCC (U.S.) total.

b/ Regional and subregional peak demands are based on the greater of summer or winter regional and subregional peak. In some cases, these regional data are based on non-coincident summations of summer and winter peak demands of member systems. NERC totals represent a non-coincident summation of these data.

c/ Because the 1-10 year and the 11-20 year data are compiled on different bases, there may be discontinuities when computations of annual growth rates are made for the 10th-11th years.

Net Electrical Energy Requirements

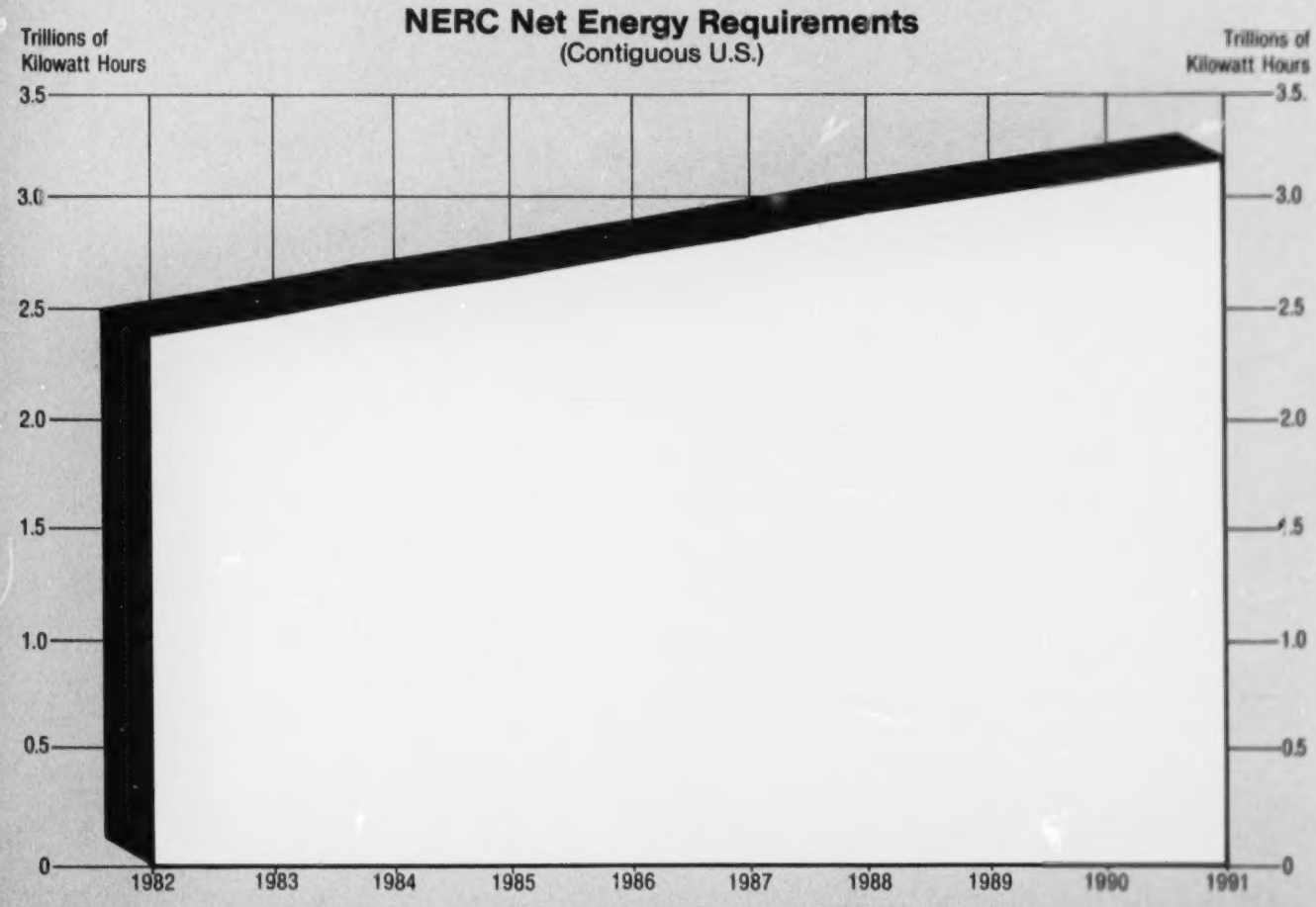
The *Net Electrical Energy Requirements* data represent the total annual electrical energy needed to serve the projected load.

Utilities are forecasting a growth of net energy requirements for 1982-1991 which, in the aggregate for the U.S., results in an average annual growth rate of 3.3%. Last year's projected average annual growth rate for 1981-1990 was 3.7%.

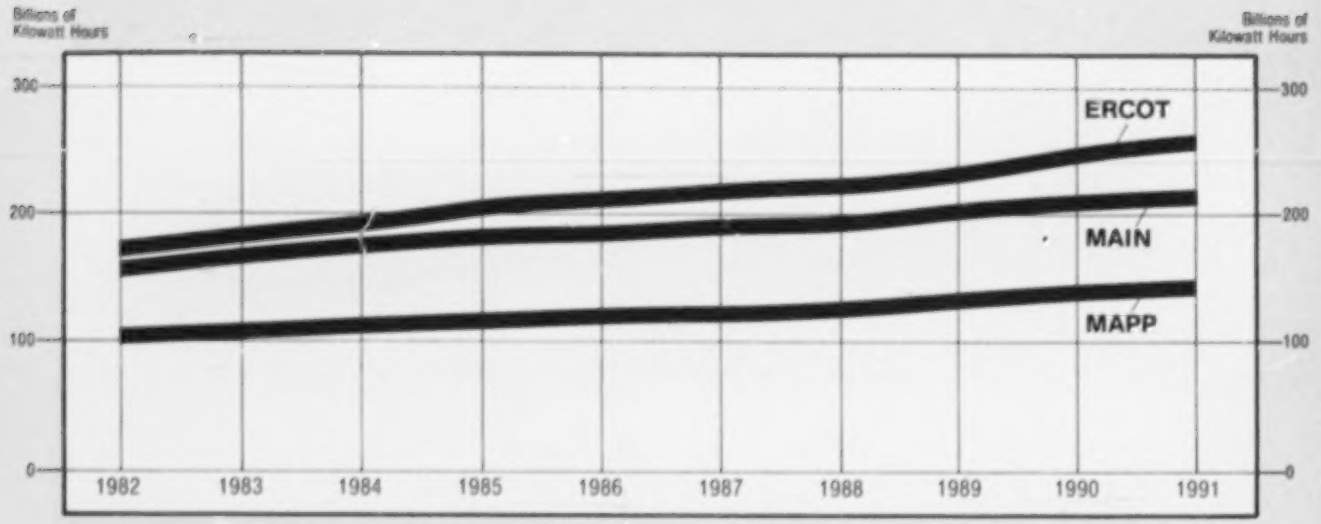
This decline of 0.4% in the growth rate projected for net energy parallels the decline of 0.4% in the growth rate projected for summer peak demand for the same period (refer to Tables 1-3).

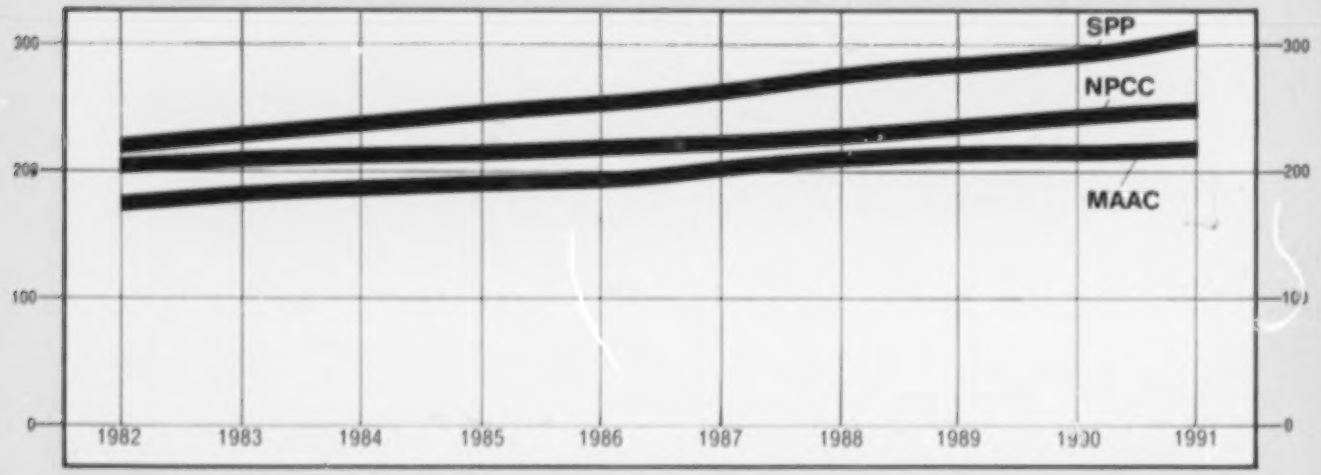
Even though the NERC Regions are expecting a substantially lower growth rate than in past years, based on this year's projections they will require a full one-third more electric energy ten years from now.

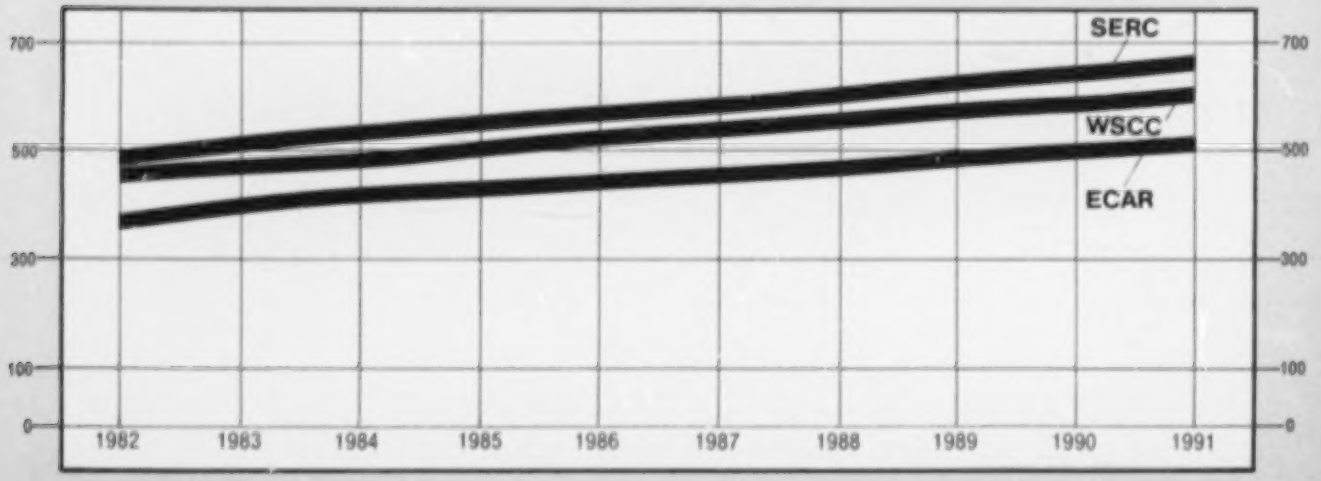
For a breakdown by principal energy sources of the electric generation needed to provide this energy by 1991, refer to Table 22.



Regional Net Energy Requirements
(Contiguous U.S.)







Regional: Net Electrical Energy Requirements — Million kWhr

TABLE 4

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	366,376	378,400	398,000	420,200	430,900	444,800	458,700	475,000	489,600	501,700	514,900
ERCOT	164,920	174,924	183,331	192,376	201,015	209,702	218,824	227,581	237,367	247,472	258,166
MAAC	174,668	179,755	184,068	188,929	194,024	198,744	203,051	207,868	212,697	217,394	222,013
MAIN	162,899	168,211	172,611	177,625	182,350	187,374	193,177	197,876	203,137	208,435	214,271
MAPP—U.S.	96,307	102,039	107,627	112,062	117,638	122,090	126,276	130,534	134,738	139,288	144,026
NPCC—U.S.	202,620	204,162	207,797	210,979	215,185	220,242	226,025	231,387	236,874	242,099	247,321
SERC	483,595	494,344	514,651	535,974	554,564	570,753	588,567	607,444	625,620	645,529	666,750
SPP	211,833	220,768	230,076	238,468	247,445	256,588	265,512	274,972	283,404	293,014	302,951
WSCC—U.S.	447,788	462,659	473,885	485,527	505,248	523,460	543,132	562,406	578,204	593,708	610,549
NERC—U.S.	2,311,006	2,385,262	2,471,166	2,562,140	2,648,569	2,733,753	2,823,264	2,915,068	3,001,631	3,088,639	3,180,947
MAPP—Canada	22,013	23,949	25,886	26,132	27,636	29,126	30,151	31,242	32,248	33,246	34,265
NPCC—Canada	209,247	221,266	232,658	244,775	257,126	273,717	287,114	301,087	315,011	329,929	344,781
WSCC—Canada	59,019	65,368	70,309	76,066	81,470	86,858	91,165	94,458	98,339	102,185	106,556
NERC—Total	2,601,285	2,695,785	2,799,219	2,909,113	3,014,821	3,123,454	3,231,694	3,341,855	3,447,229	3,553,919	3,666,549

Subregional: Net Electrical Energy Requirements — Million kWhr

TABLE 4S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	118,395	118,062	119,797	121,289	123,355	126,002	129,005	131,687	134,054	136,379	138,841
New England	84,225	86,100	88,000	89,690	91,830	94,240	97,020	99,700	102,820	105,720	108,480
NPCC—U.S.	202,620	204,162	207,797	210,979	215,185	220,242	226,025	231,387	236,874	242,099	247,321
New Brunswick	8,306	9,221	9,631	9,950	10,231	10,536	10,824	11,106	11,387	11,669	11,959
Ontario	101,659	109,045	108,727	112,725	116,475	120,681	124,790	129,481	133,624	138,260	142,822
Québec	99,282	107,000	114,300	122,100	130,400	142,500	151,500	160,500	170,000	180,000	190,000
NPCC—Canada	209,247	221,266	232,658	244,775	257,126	273,717	287,114	301,087	315,011	329,929	344,781
Florida	96,222	100,070	104,770	108,691	112,477	116,313	120,543	124,664	128,680	132,943	137,648
Southern	111,415	113,462	117,397	122,082	126,512	131,020	135,536	140,349	144,576	149,676	154,629
TVA	119,045	120,340	124,774	131,087	134,711	136,195	138,302	140,644	142,970	145,654	149,532
VACAR	156,913	160,472	167,710	174,204	180,864	187,825	194,186	201,787	209,394	217,256	224,941
SERC	483,595	494,344	514,651	535,974	554,564	570,753	588,567	607,444	625,620	645,529	666,750
Group A	104,918	107,305	112,623	116,591	120,819	125,159	128,726	132,467	136,187	140,234	144,385
Group B	62,775	67,131	69,765	72,344	75,166	77,869	80,494	83,636	86,781	90,032	93,729
Group C	44,140	46,072	47,680	49,533	51,460	53,629	56,292	58,869	60,516	62,748	64,837
SPP	211,833	220,768	230,076	238,468	247,445	256,588	265,512	274,972	283,404	293,014	302,951
NWPP—U.S.	175,649	184,051	190,391	197,570	204,398	211,536	219,114	226,582	231,586	237,219	242,776
RMPA	30,522	32,038	34,462	36,731	39,492	41,509	43,919	45,880	48,326	50,428	52,436
AZ-NM	44,884	47,626	48,572	49,186	53,555	55,873	58,516	62,076	64,980	67,982	70,713
CA-NV	196,733	198,944	199,380	202,640	207,903	214,542	221,583	227,868	233,392	239,159	244,624
WSCC—U.S.	447,788	462,659	473,805	485,527	505,248	523,460	543,132	562,406	578,284	593,788	610,549

Net Electrical Energy Requirements Growth Rates

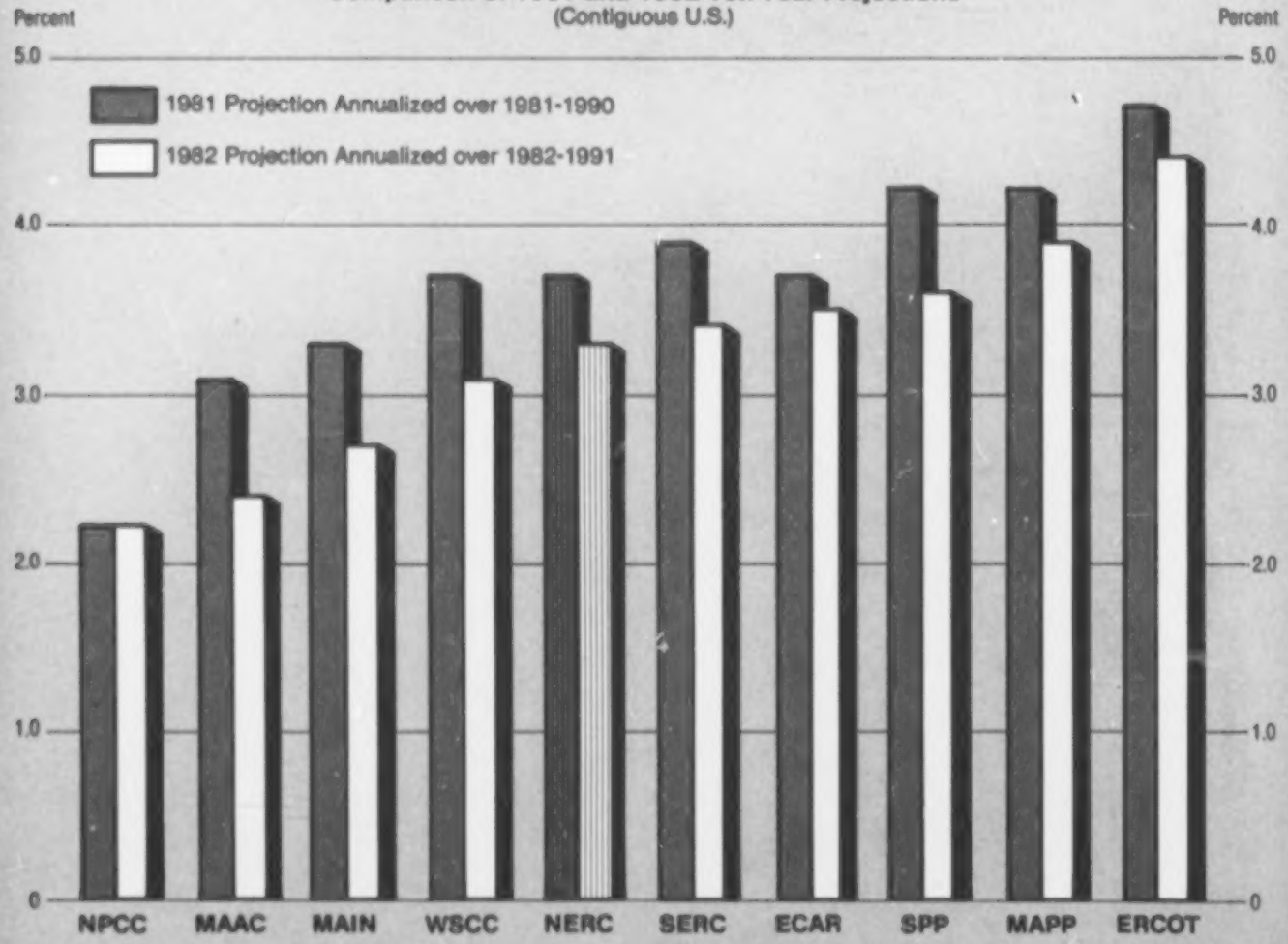
The growth rates of net electrical energy requirements of the NERC Regions and Subregions are expressed as a percent in the following tables. The average annual growth rates for the 1982-1991 period are shown in the right-hand column of each table.

Utilities are forecasting net electrical energy requirements for 1982-1991 which, in the aggregate for the U.S., result in an average annual growth rate of 3.3%. Last year's projected growth rate for 1981-1990 was 3.7%.

The growth rates for electrical energy of the NERC Regions in the U.S. range from an average 2.2% annually, as projected by NPCC, to the 4.4% projected by ERCOT.

Subregional growth in the U.S. shows an even wider range, from the 1.8% expected by the New York Subregion (NY) of NPCC, to the 5.6% expected by the Rocky Mountain Power Area (RMPA) of WSCC. NPCC's Canadian Subregion of Québec is projecting a growth rate for net electrical energy of 6.6% for the 1982-1991 period.

Net Electrical Energy Growth Rates
Comparison of 1981 and 1982 Ten-Year Projections
(Contiguous U.S.)



Regional: Net Electrical Energy Growth Rates — %

TABLE 5

Region	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
ECAR	3.2	3.6	2.5	3.2	3.1	3.6	3.1	2.5	2.6	3.5
ERCOT	4.8	4.9	4.5	4.3	4.3	4.0	4.3	4.3	4.3	4.4
MAAC	2.4	2.6	2.7	2.4	2.2	2.4	2.3	2.2	2.1	2.4
MAIN	2.6	2.9	2.8	2.6	3.1	2.4	2.7	2.6	2.8	2.7
MAPP—U.S.	5.5	4.1	5.0	3.8	3.4	3.4	3.2	3.4	3.4	3.9
NPCC—U.S.	1.8	1.5	2.0	2.4	2.6	2.4	2.4	2.2	2.2	2.2
SERC	4.1	4.1	3.5	2.9	3.1	3.2	3.0	3.2	3.3	3.4
SPP	4.2	3.6	3.8	3.7	3.5	3.6	3.1	3.4	3.4	3.6
WSCC—U.S.	2.2	2.6	4.1	3.6	3.8	3.5	2.8	2.7	2.8	3.1
NERC—U.S.	3.6	3.7	3.4	3.2	3.3	3.3	3.0	2.9	3.0	3.3
MAPP—Canada	4.7	4.2	5.8	5.3	3.5	3.6	3.2	3.1	3.1	4.1
NPCC—Canada	5.1	5.2	5.0	6.5	4.9	4.9	4.6	4.7	4.5	5.1
WSCC—Canada	7.6	8.2	7.1	6.6	5.0	3.6	4.1	3.8	4.4	5.6
NERC—Total	3.8	3.9	3.6	3.6	3.5	3.4	3.2	3.1	3.2	3.5

Subregional: Net Electrical Energy Growth Rates — %

TABLE 5S

Subregion	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
New York	1.5	1.2	1.7	2.1	2.4	2.1	1.8	1.7	1.8	1.8
New England	2.2	1.9	2.4	2.6	2.9	2.8	3.1	2.8	2.6	2.6
NPCC—U.S.	1.8	1.5	2.0	2.4	2.6	2.4	2.4	2.2	2.2	2.2
New Brunswick	4.4	3.3	3.0	2.8	2.7	2.6	2.5	2.5	2.5	2.9
Ontario	3.5	3.7	3.3	3.6	3.4	3.8	3.2	3.5	3.3	3.5
Québec	6.8	6.8	6.8	9.3	6.3	5.9	5.9	5.9	5.6	6.6
NPCC—Canada	5.1	5.2	5.0	6.5	4.9	4.9	4.6	4.7	4.5	5.1
Florida	4.7	3.7	3.6	3.6	3.5	3.4	3.2	3.3	3.5	3.6
Southern	3.5	4.0	3.6	3.6	3.4	3.6	3.0	3.5	3.3	3.5
TVA	3.7	5.1	2.8	1.1	1.5	1.7	1.7	1.9	2.7	2.4
VACAR	4.5	3.9	3.8	3.4	3.8	3.9	3.8	3.8	3.5	3.8
SERC	4.1	4.1	3.5	2.9	3.1	3.2	3.0	3.2	3.3	3.4
Group A	4.8	3.5	3.6	3.6	2.9	2.9	2.8	3.0	3.0	3.3
Group B	3.9	3.7	3.9	3.5	3.5	3.9	3.7	3.8	4.1	3.8
Group C	3.5	3.9	3.9	4.2	5.0	4.6	2.8	3.7	3.3	3.9
SPP	4.2	3.6	3.8	3.7	3.5	3.6	3.1	3.4	3.4	3.6
NWPP—U.S.	3.4	3.8	3.5	3.5	3.6	3.4	2.2	2.4	2.3	3.1
RMPA	8.2	6.0	7.5	5.1	5.8	4.5	5.3	4.3	4.0	5.6
AZ-NM	2.0	1.3	8.9	4.3	4.7	6.1	4.5	4.6	4.1	4.5
CA-NV	.2	1.3	2.9	3.2	3.3	2.8	2.4	2.0	2.7	2.3
WSCC—U.S.	2.2	2.6	4.1	3.6	3.8	3.5	2.8	2.7	2.8	3.1

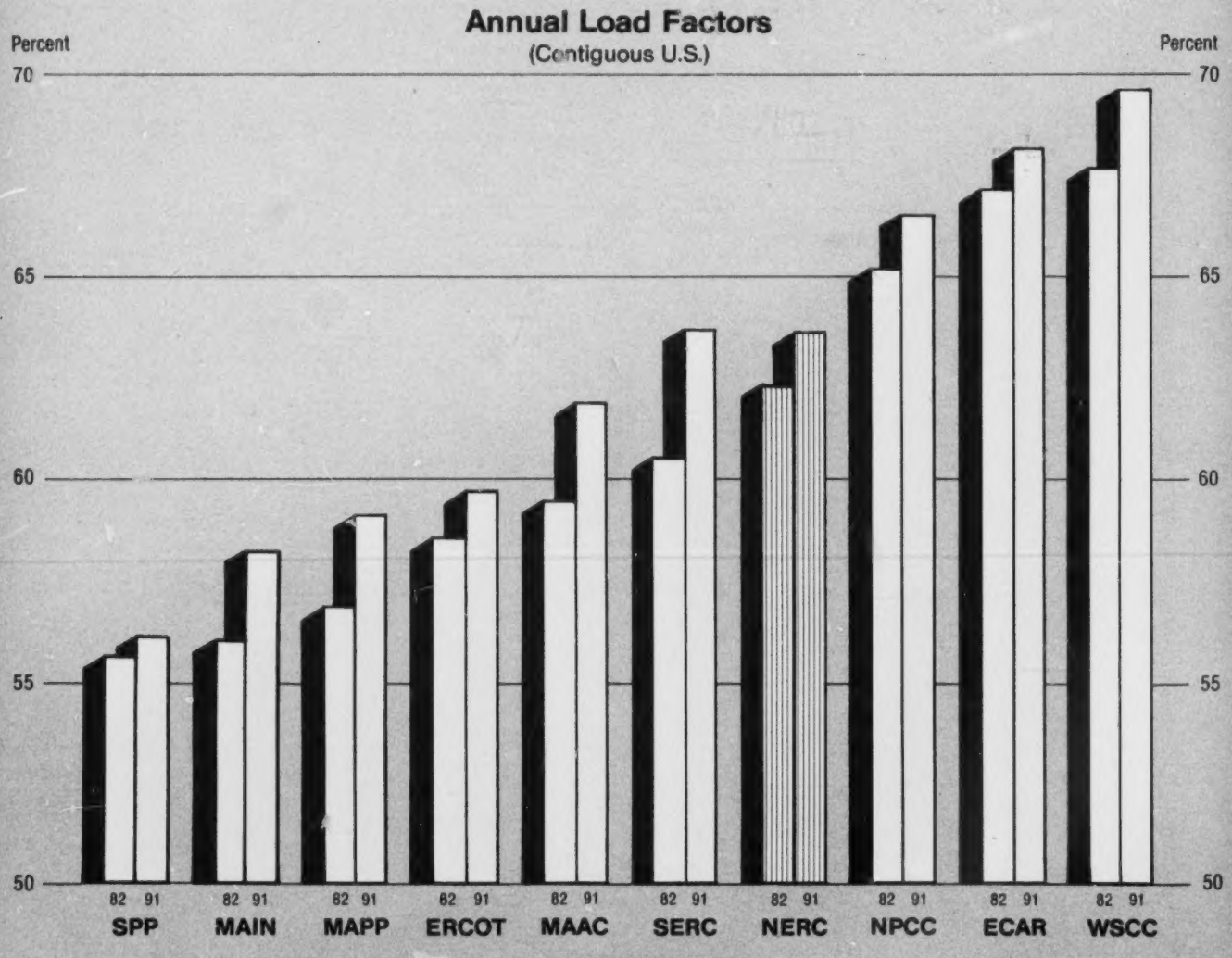
Annual Load Factors

The annual load factors of the NERC Regions and Subregions are expressed as a percent in the following tables. Load factor is the ratio of average load to peak load for a specified period of time.

Load Factors are calculated here from *Net Energy for Load* (Table 4) divided by the product of the greater of *Summer* or previous *Winter Peak Demands* (Tables 1-2) multiplied by 8760 hours per year.

The lower load factors are generally found in areas with a high seasonal peak and little heavy industry. High load factors usually reflect a moderate, balanced climate or a heavier mix of industrial loads.

Regional load factors range from the mid 50's in MAIN and SPP to the high 60's in ECAR and WSCC.



Regional: Load Factors — %

TABLE 6

Region	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	67.1	67.7	68.4	68.2	68.4	68.4	68.4	68.4	68.3	68.2
ERCOT	58.7	59.1	59.7	59.6	59.6	59.6	59.4	59.5	59.8	59.8
MAAC	59.5	59.7	60.1	60.4	60.7	61.1	61.3	61.6	61.7	61.9
MAIN	56.0	56.1	56.3	56.5	56.9	57.4	57.6	57.8	58.0	58.4
MAPP—U.S.	56.9	57.4	57.3	57.8	58.2	58.4	58.5	58.7	58.9	59.1
NPCC—U.S.	65.2	65.2	65.3	65.4	65.6	65.8	65.9	66.1	66.3	66.6
SERC	60.5	61.7	62.6	63.0	63.3	63.4	63.5	63.6	63.7	63.8
SPP	55.7	55.7	55.7	55.7	55.8	55.8	56.0	55.9	56.0	56.2
WSCC—U.S.	67.7	67.9	67.7	68.4	68.8	69.2	69.5	69.5	69.5	69.7
NERC—U.S.	62.2	62.3	62.7	62.9	63.2	63.4	63.5	63.6	63.7	63.8
MAPP—Canada	61.2	61.8	61.6	62.3	61.7	61.6	61.5	61.4	61.4	61.1
NPCC—Canada	65.9	66.3	66.3	66.1	66.9	66.9	67.0	67.0	67.2	67.3
WSCC—Canada	74.2	71.1	71.4	71.6	71.5	70.9	70.2	70.4	70.5	70.8
NERC—Total	64.3	64.6	65.0	65.3	65.6	65.8	66.0	66.2	66.2	66.4

Subregional: Load Factors — %

TABLE 6S

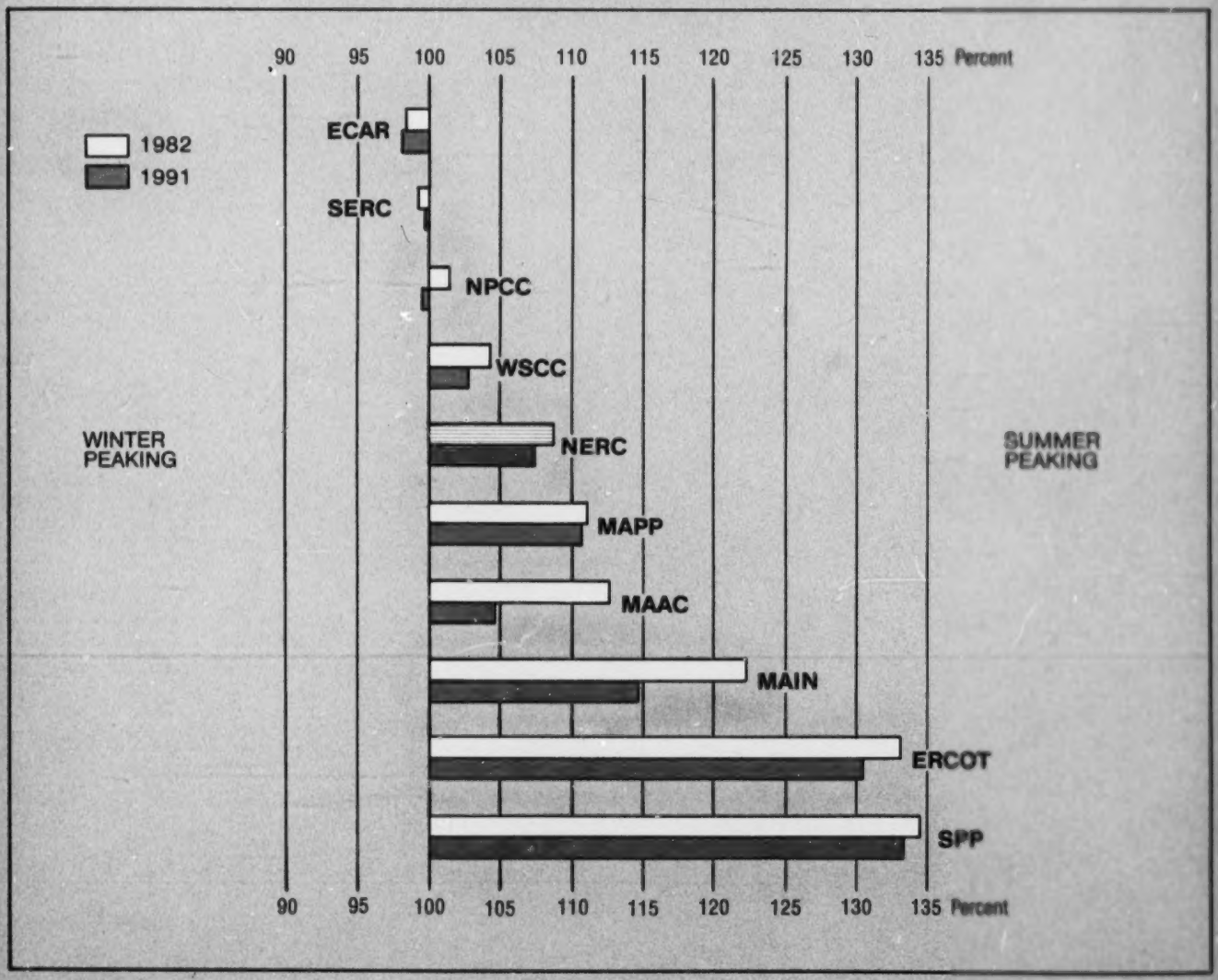
Subregion	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	63.4	63.4	63.4	63.5	63.8	64.0	64.2	64.4	64.5	64.7
New England	62.8	64.3	64.5	65.0	65.4	65.7	65.7	66.0	65.8	65.7
NPCC—U.S.	65.2	65.2	65.3	65.4	65.6	65.8	65.9	66.1	66.3	66.6
New Brunswick	67.8	65.1	64.8	64.5	64.2	64.0	63.8	63.6	63.4	63.2
Ontario	68.1	71.1	71.2	71.1	71.2	71.8	72.7	73.1	73.6	74.0
Québec	63.7	62.4	62.4	62.3	63.7	63.6	63.2	63.1	63.2	63.2
NPCC—Canada	65.9	66.3	66.3	66.1	66.9	66.9	67.0	67.0	67.2	67.3
Florida	54.3	56.0	56.4	56.7	56.9	57.3	57.7	58.0	58.0	57.8
Southern	59.1	59.8	60.2	60.6	60.8	60.5	60.7	60.7	60.7	60.6
TVA	61.1	64.3	66.1	66.8	67.1	67.1	67.3	67.0	66.6	66.7
VACAR	59.8	61.3	62.4	62.6	63.2	63.5	63.8	64.0	64.2	64.5
SERC	60.5	61.7	62.6	63.0	63.3	63.4	63.5	63.6	63.7	63.8
Group A	61.8	61.6	61.6	61.3	61.3	61.1	60.9	60.8	60.7	60.6
Group B	53.2	53.4	53.4	53.6	53.5	53.5	53.6	53.8	54.1	54.8
Group C	48.0	47.9	48.0	48.2	48.5	49.3	49.9	49.8	50.0	50.2
SPP	55.7	55.7	55.7	55.7	55.8	55.8	56.0	55.9	56.0	56.2
NWPP—U.S.	77.3	65.7	65.8	65.6	65.8	65.9	65.8	65.4	65.1	64.9
RMPA	65.5	65.9	66.5	66.9	66.3	66.4	65.7	66.2	66.9	66.2
AZ-NM	58.5	57.1	55.4	57.1	57.2	57.0	57.6	57.6	57.8	58.0
CA-NV	58.4	58.2	58.3	59.0	60.3	60.9	61.5	61.7	61.6	62.1
WSCC—U.S.	67.7	67.9	67.7	68.4	68.8	69.2	69.5	69.5	69.5	69.7

Summer/Winter Peak Demand Ratios

The relationships between the summer and winter peak demands of the NERC Regions and Subregions are expressed in the following tables as a percent: the summer peak divided by the peak of the following winter.

The seasonal demand ratios of the NERC Regions range from the winter peaking ECAR to the relatively heavy summer peaking SPP and ERCOT.

Summer/Winter Peak Demand Ratios
(Contiguous U.S.)



Regional: Summer/Winter Peak Demand Ratios — %

TABLE 7

Region	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	98.6	97.7	99.0	99.1	98.6	98.3	98.3	98.7	98.5	98.4
ERCOT	133.0	132.8	131.7	132.3	132.7	132.2	132.2	132.1	130.9	130.4
MAAC	112.6	111.9	110.7	109.9	109.0	107.8	106.9	106.2	105.5	104.7
MAIN	122.4	121.4	120.6	119.7	118.6	117.6	116.8	116.2	115.3	114.7
MAPP—U.S.	111.2	111.6	111.0	111.7	111.8	111.8	111.9	111.6	111.1	110.8
NPCC—U.S.	101.4	101.7	101.4	101.2	101.1	101.0	100.8	100.4	100.1	99.7
SERC	99.3	100.5	100.1	100.0	99.8	100.0	99.9	99.8	99.9	99.9
SPP	134.6	135.0	134.8	134.7	134.7	134.8	134.5	134.2	133.8	133.3
WSCC—U.S.	104.3	103.8	102.6	102.1	101.2	100.9	100.8	101.0	101.0	102.3
NERC—U.S.	109.5	109.4	109.2	109.1	107.7	107.4	107.3	107.2	107.0	107.0
MAPP—Canada	76.3	75.7	75.4	74.0	76.0	75.8	75.8	75.9	75.7	75.9
NPCC—Canada	70.1	69.5	68.9	68.5	69.4	69.0	68.7	68.6	69.2	69.2
WSCC—Canada	77.0	76.3	76.7	76.6	77.2	77.1	76.9	77.1	77.1	77.1
NERC—Total	104.1	103.8	103.5	103.2	102.9	102.6	102.4	102.3	102.1	102.1

Subregional: Summer/Winter Peak Demand Ratios — %

TABLE 7S

Subregion	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	136.7	131.6	132.4	132.3	132.2	132.0	132.2	132.4	132.4	132.4
Missouri	136.2	131.7	127.8	124.4	121.4	118.6	116.0	113.4	111.0	108.9
So. Cent. Ill.	117.3	116.1	115.6	114.7	113.4	112.2	111.1	110.0	109.7	109.1
WUMS	103.0	101.4	100.2	99.7	99.1	98.2	97.6	97.2	96.8	96.3
MAIN	122.4	121.4	120.6	119.7	118.6	117.6	116.8	116.2	115.3	114.7
New York	108.1	108.5	107.8	107.3	107.0	106.8	106.7	106.3	105.9	105.4
New England	92.9	93.2	93.4	93.6	93.6	93.6	93.5	93.3	93.1	92.8
NPCC—U.S.	101.4	101.7	101.4	101.2	101.1	101.0	100.8	100.4	100.1	99.7
New Brunswick	75.8	75.1	75.2	75.2	75.2	75.2	75.2	75.3	75.3	75.2
Ontario	80.4	80.4	79.9	79.9	80.7	80.5	80.2	80.1	81.3	80.9
Québec	61.1	60.3	59.8	59.3	60.7	60.5	60.5	60.7	61.0	61.4
NPCC—Canada	70.1	69.5	68.9	68.5	69.4	69.0	68.7	68.6	69.2	69.2
Florida	88.4	88.7	90.0	89.9	90.2	90.0	89.7	89.0	88.4	88.8
Southern	117.6	115.7	115.6	114.7	114.7	115.2	114.9	114.8	114.9	115.0
TVA	92.8	97.9	97.2	97.7	97.4	97.9	98.2	98.5	98.9	98.8
VACAR	100.4	101.3	99.6	99.7	98.9	98.8	98.7	98.7	99.0	98.9
SERC	99.3	100.5	100.1	100.0	99.8	100.0	99.9	99.8	99.9	99.9
Group A	130.3	132.4	131.6	132.3	132.9	133.1	133.2	133.1	133.4	133.3
Group B	138.7	138.2	138.0	138.9	138.4	138.5	138.0	137.2	136.4	135.2
Group C	137.7	135.9	135.7	133.8	133.5	133.1	132.7	132.2	131.2	130.8
SPP	134.6	135.0	134.8	134.7	134.7	134.8	134.5	134.2	133.8	133.3
NWPP—U.S.	75.6	74.6	74.5	74.5	74.3	74.7	74.7	74.6	74.5	76.4
RMPA	99.1	100.7	99.9	99.9	100.0	101.5	100.6	101.4	100.9	103.0
AZ-NM	128.9	139.0	137.3	136.6	137.4	137.4	137.4	137.7	137.8	138.3
CA-NV	129.1	128.2	128.5	127.8	124.4	124.2	123.3	123.2	123.8	123.7
WSCC—U.S.	104.3	103.8	102.6	102.1	101.2	100.9	100.8	101.0	101.0	102.3

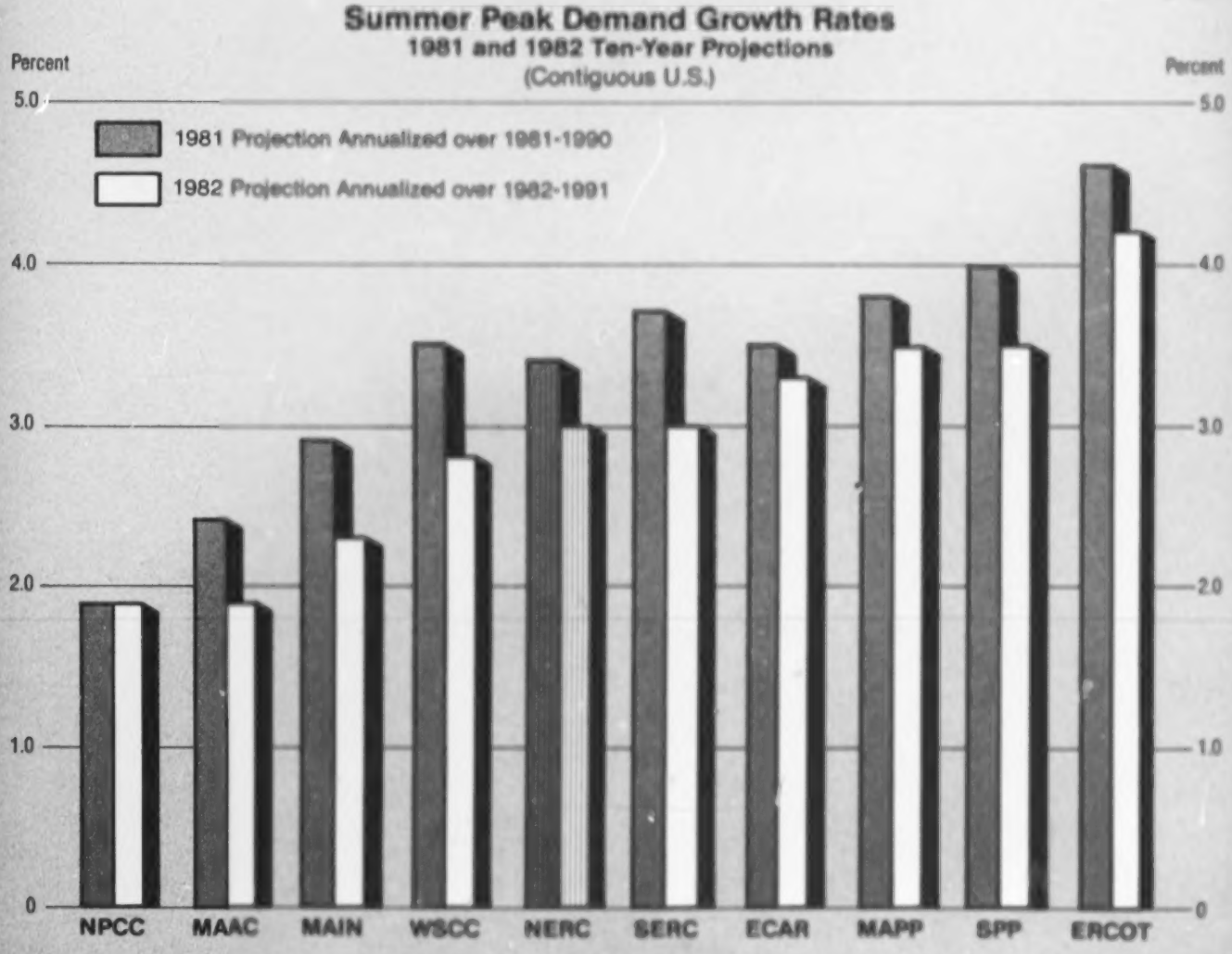
Peak Demand Growth Rates

The summer and winter peak demand growth rates of the NERC Regions and Subregions are expressed as a percent in the following tables. The average annual growth rates for the ten-year period are shown in the right-hand column of each table.

Utilities are forecasting summer peak demands for 1982-1991 which, in the aggregate for the U.S., result in an average annual growth rate of 3.0%. Last year's projected average annual growth rate for the 1981-1990 period was 3.4%. Winter peak demands for 1982-1991 are projected to increase an average of 3.1% annually.

The summer peak demand growth rates of the NERC Regions in the U.S. range from a low of 1.9% annually, as projected by MAAC and by NPCC, to 4.2% projected by ERCOT.

Subregional summer growth in the U.S. shows an even wider range, from the 1.6% expected by the New York Subregion (NY) of NPCC and by the California-Nevada Power Area (CA-NV) of WSCC, to the 5.5% expected by the Rocky Mountain Power Area (RMPA) of WSCC. NPCC's Canadian Subregion of Québec is projecting a summer peak demand growth rate of 6.3% for the 1982-1991 period.



Regional: Peak Demand Growth Rates — Summer — %

TABLE 8

Region	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
ECAR	4.3	4.6	2.8	2.9	3.2	3.5	3.1	2.6	2.7	3.3
ERCOT	4.0	3.9	4.8	4.3	4.4	4.3	4.2	3.7	4.2	4.2
MAAC	2.1	2.0	2.3	1.8	1.6	2.0	1.9	1.9	1.8	1.9
MAIN	2.5	2.6	2.3	2.0	2.1	2.2	2.2	2.2	2.1	2.3
MAPP—U.S.	4.7	4.2	4.0	3.2	3.0	3.2	2.9	3.1	3.0	3.5
NPCC—U.S.	1.7	1.4	1.9	2.0	2.4	2.1	2.1	1.9	1.0	1.9
SERC	4.1	2.6	2.7	2.5	3.0	2.9	2.8	3.2	3.0	3.0
SPP	4.2	3.6	3.8	3.6	3.3	3.3	3.2	3.2	3.0	3.5
WSCC—U.S.	1.9	3.0	3.1	3.0	3.1	3.2	2.8	2.7	2.6	2.8
NERC—U.S.	3.3	3.1	3.0	2.0	3.0	3.0	2.0	2.0	2.7	3.0
MAPP—Canada	3.0	4.2	4.5	6.5	3.4	3.4	3.2	3.3	3.1	3.9
NPCC—Canada	4.5	4.4	4.6	6.2	4.2	4.2	4.3	5.1	4.5	4.7
WSCC—Canada	5.7	7.7	6.4	6.6	4.5	3.4	4.2	3.8	4.3	5.2
NERC—Total	3.4	3.3	3.2	3.1	3.1	3.1	3.0	3.0	2.9	3.1

Subregional: Peak Demand Growth Rates — Summer — %

TABLE 8S

Subregion	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
Cmwlth Ed.	2.7	2.7	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.2
Missouri	1.9	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0
So. Cent. Ill.	3.2	3.1	2.8	2.2	2.9	2.3	2.5	3.1	2.6	2.8
WUMS	1.7	2.1	2.8	2.2	2.0	2.1	2.3	1.9	2.1	2.1
MAIN	2.5	2.6	2.3	2.0	2.1	2.2	2.2	2.2	2.1	2.3
New York	1.5	1.2	1.6	1.7	2.0	1.8	1.5	1.5	1.5	1.6
New England	2.0	1.8	2.3	2.4	2.9	2.6	2.9	2.5	2.2	2.4
NPCC—U.S.	1.7	1.4	1.9	2.0	2.4	2.1	2.1	1.9	1.8	1.9
New Brunswick	3.9	3.6	3.2	3.1	3.0	2.9	2.9	2.8	2.7	3.1
Ontario	3.5	2.9	3.5	3.5	2.3	2.3	2.5	4.3	3.0	3.1
Québec	5.6	6.1	5.9	9.2	6.2	6.0	6.1	6.0	5.9	6.3
NPCC—Canada	4.5	4.4	4.6	6.2	4.2	4.2	4.3	5.1	4.5	4.7
Florida	3.3	4.4	3.1	3.1	2.6	2.4	2.5	3.1	2.8	3.0
Southern	2.2	3.4	3.0	3.2	4.0	3.3	2.9	3.6	3.4	3.2
TVA	7.9	1.1	1.1	1.2	1.9	2.1	2.2	2.4	2.6	2.5
VACAR	3.4	2.1	3.4	2.6	3.2	3.5	3.4	3.4	3.1	3.1
SERC	4.1	2.6	2.7	2.5	3.0	2.9	2.8	3.2	3.0	3.0
Group A	5.1	3.5	4.2	3.7	3.2	3.1	3.1	3.2	3.1	3.6
Group B	3.4	3.8	3.6	3.5	3.6	3.6	3.4	3.2	2.9	3.4
Group C	3.6	3.6	3.6	3.4	3.3	3.2	3.2	3.2	3.0	3.3
SPP	4.2	3.6	3.8	3.6	3.3	3.3	3.2	3.2	3.0	3.5
NWPP—U.S.	2.2	3.6	3.3	3.1	4.2	2.7	2.7	2.6	2.5	3.0
RMPA	7.5	5.0	6.9	6.1	5.7	5.5	4.6	3.3	5.1	5.5
AZ-NM	4.5	4.4	5.5	4.2	5.2	5.0	4.6	4.3	3.0	4.6
CA-NV	.8	1.8	1.6	1.1	2.2	1.9	2.0	2.2	1.9	1.6
WSCC—U.S.	1.9	3.0	3.1	3.0	3.1	3.2	2.8	2.7	2.6	2.8

Regional: Peak Demand Growth Rates — Winter — %

TABLE 9

Region	1982/83-1983/84	1983/84-1984/85	1984/85-1985/86	1985/86-1986/87	1986/87-1987/88	1987/88-1988/89	1988/89-1989/90	1989/90-1990/91	1990/91-1991/92	1982/83-1991/92
ECAR	5.1	3.3	2.7	3.4	3.5	3.5	2.7	2.8	2.8	3.3
ERCOT	4.1	4.7	4.3	4.0	4.8	4.3	4.2	4.7	4.7	4.4
MAAC	2.7	3.1	3.0	2.7	2.7	2.8	2.6	2.6	2.5	2.8
MAIN	3.3	3.2	3.1	2.9	3.0	2.9	2.8	2.9	2.7	3.0
MAPP—U.S.	4.3	4.7	3.3	3.1	3.0	3.1	3.2	3.5	3.3	3.5
NPCC—U.S.	1.4	1.7	2.1	2.1	2.5	2.3	2.5	2.3	2.1	2.1
SERC	2.8	3.1	2.8	2.8	2.8	3.0	3.0	3.1	2.9	2.9
SPP	3.9	3.8	3.9	3.5	3.3	3.5	3.5	3.5	3.4	3.6
WSCC—U.S.	3.1	3.4	3.5	3.9	3.3	3.3	2.6	2.7	1.3	3.0
NERC—U.S.	3.4	3.3	3.1	3.2	3.2	3.2	2.9	3.0	2.7	3.1
MAPP—Canada	4.6	4.6	6.4	3.7	3.8	3.4	3.1	3.5	2.9	4.0
NPCC—Canada	5.3	5.3	5.3	4.8	4.7	4.6	4.5	4.3	4.5	4.8
WSCC—Canada	7.7	7.2	6.4	5.9	4.6	3.7	3.8	3.9	4.2	5.3
NERC—Total	3.7	3.6	3.4	3.4	3.4	3.3	3.1	3.2	2.9	3.3

Subregional: Peak Demand Growth Rates — Winter — %

TABLE 9S

Subregion	1982/83-1983/84	1983/84-1984/85	1984/85-1985/86	1985/86-1986/87	1986/87-1987/88	1987/88-1988/89	1988/89-1989/90	1989/90-1990/91	1990/91-1991/92	1982/83-1991/92
Cmwlth Ed.	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Missouri	5.4	5.3	4.8	4.6	4.4	4.4	4.4	4.2	4.0	4.6
So. Cent. Ill.	4.3	3.6	3.6	3.3	4.0	3.3	2.9	4.2	3.1	3.6
WUMS	3.3	3.4	3.3	2.8	2.8	2.8	2.7	2.4	2.6	2.9
MAIN	3.3	3.2	3.1	2.9	3.0	2.9	2.8	2.9	2.7	3.0
New York	1.1	1.8	2.1	1.9	2.2	1.9	2.0	1.9	1.8	1.9
New England	1.7	1.5	2.0	2.4	2.8	2.7	3.1	2.7	2.5	2.4
NPCC—U.S.	1.4	1.7	2.1	2.1	2.5	2.3	2.5	2.3	2.1	2.1
New Brunswick	3.8	3.5	3.1	3.1	3.0	2.9	2.8	2.8	2.8	3.1
Ontario	3.5	3.5	3.5	2.5	2.5	2.7	2.7	2.8	3.5	3.0
Québec	6.9	6.9	6.9	6.6	6.5	6.1	5.8	5.5	5.2	6.3
NPCC—Canada	5.3	5.3	5.3	4.8	4.7	4.6	4.5	4.3	4.5	4.8
Florida	3.0	2.9	3.3	2.7	2.8	2.7	3.3	3.8	2.3	3.0
Southern	3.9	3.5	3.7	3.1	3.5	3.6	2.9	3.6	3.3	3.5
TVA	2.2	1.8	.6	1.5	1.4	1.8	1.9	1.9	2.7	1.8
VACAR	2.5	3.9	3.4	3.4	3.3	3.6	3.5	3.0	3.2	3.3
SERC	2.8	3.1	2.8	2.8	2.8	3.0	3.0	3.1	2.9	2.9
Group A	3.4	4.1	3.6	3.2	3.1	3.0	3.1	3.0	3.2	3.3
Group B	3.8	3.4	3.5	3.9	3.5	4.1	4.0	3.8	3.8	3.7
Group C	5.0	3.8	5.1	3.7	3.6	3.5	3.5	4.0	3.3	3.9
SPP	3.9	3.8	3.9	3.5	3.3	3.5	3.5	3.5	3.4	3.6
NWP[a]—U.S.	3.6	3.8	3.3	3.4	3.6	2.8	2.8	2.7	-.1[a]	2.9
RMPA	5.8	5.9	6.8	6.0	4.2	6.4	3.7	3.9	2.1	5.0
AZ-NM	4.4	5.7	4.5	5.1	5.2	5.0	4.4	4.2	3.4	4.6
CA-NV	1.5	.8	2.1	3.8	2.3	2.7	2.1	1.7	2.0	2.1
WSCC—U.S.	3.1	3.4	3.5	3.9	3.3	3.3	2.6	2.7	1.3[a]	3.0

TABLE 10

Regional: Peak Demand Growth Rates for 11 to 20 Year Period — % [b,c]

Region	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	1992-2001
ECAR	2.7	2.8	2.8	2.7	2.6	2.7	2.6	2.6	2.7	2.7
ERCOT	4.2	3.7	3.7	3.7	3.8	3.8	3.7	3.6	3.7	3.8
MAAC	1.7	1.7	1.6	1.6	1.6	1.4	1.5	1.4	1.4	1.6
MAIN	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.6	2.4	2.3
MAPP—U.S.	2.9	2.9	2.8	3.1	3.1	3.0	3.0	3.0	3.1	3.0
NPCC—U.S.	1.8	1.8	1.5	1.8	1.4	1.7	1.6	1.4	1.4	1.6
SERC	3.4	3.2	3.3	3.1	3.1	3.2	3.1	3.2	3.2	3.2
SPP	3.0	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.4	3.2
WSCC—U.S.	2.4	2.4	2.4	2.5	2.5	2.6	2.5	2.5	2.6	2.5
NERC—U.S.	2.8	2.7	2.8	2.7	2.7	2.8	2.7	2.8	2.8	2.8
MAPP—Canada	2.6	2.4	2.9	2.7	2.3	2.1	2.2	2.1	2.2	2.4
NPCC—Canada	4.4	4.4	4.3	4.1	4.0	3.8	3.5	3.3	3.2	3.9
WSCC—Canada	4.3	4.3	4.8	4.2	3.8	4.2	3.9	3.6	3.6	4.1
NERC—Total	3.0	2.9	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.9

TABLE 10S

Subregional: Peak Demand Growth Rates for 11 to 20 Year Period — % [b,c]

Subregion	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	1992-2001
Cmwlth Ed.	1.9	1.9	2.1	2.1	2.0	2.0	2.0	1.9	1.9	2.0
Missouri	2.3	2.5	2.6	2.6	2.8	2.8	2.6	5.1	3.5	3.0
So. Cent. Ill.	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4
WUMS	2.5	2.4	2.3	2.3	2.4	2.2	2.2	2.2	2.3	2.3
MAIN	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.6	2.4	2.3
New York	1.6	1.8	1.6	1.6	1.6	1.8	1.9	1.8	1.8	1.7
New England	2.0	1.9	1.4	2.0	1.3	1.7	1.3	1.0	1.0	1.5
NPCC—U.S.	1.8	1.8	1.5	1.8	1.4	1.7	1.6	1.4	1.4	1.6
New Brunswick	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.7
Ontario	3.1	3.1	2.9	2.6	2.3	2.2	2.0	2.0	2.0	2.5
Québec	5.4	5.4	5.3	5.0	5.0	4.8	4.4	4.0	3.8	4.8
NPCC—Canada	4.4	4.4	4.3	4.1	4.0	3.8	3.5	3.3	3.2	3.9
Florida	3.5	2.6	3.3	2.8	2.9	2.9	2.9	2.9	3.0	3.0
Southern	3.3	3.2	3.2	3.1	3.2	3.2	3.1	3.2	3.2	3.2
TVA	3.2	3.3	3.1	2.7	2.6	2.7	2.8	3.2	2.8	2.9
VACAR	3.4	3.5	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.5
SERC	3.4	3.2	3.3	3.1	3.1	3.2	3.1	3.2	3.2	3.2
Group A	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1
Group B	2.9	3.0	3.0	3.2	3.2	3.3	3.2	3.2	3.2	3.1
Group C	3.1	3.1	3.3	3.3	3.4	3.4	3.4	3.5	4.1	3.4
SPP	3.0	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.4	3.2
NWPP—U.S.	2.4	2.5	2.4	2.5	2.5	2.6	2.6	2.7	2.8	2.6
RMPA	4.0	4.9	3.3	5.4	4.2	4.1	4.1	4.1	4.1	4.2
AZ-NM	3.5	3.3	3.4	3.0	3.2	3.3	3.1	3.0	3.1	3.2
CA-NV	1.8	1.9	2.0	2.1	2.2	2.3	2.1	2.2	2.2	2.1
WSCC—U.S.	2.4	2.4	2.4	2.5	2.5	2.6	2.5	2.5	2.6	2.5

Footnotes

a/ Reflects the difference between the peak winter month of January, and the following December, the last month of the reporting period.

b/ Regional and subregional peak demands are based on the greater of summer or winter regional and subregional peak. In some cases, these regional data are based on non-coincident summations of summer and winter peak demands of member systems.

c/ Because the 1-10 year and the 11-20 year data are compiled on different bases, there may be discontinuities when computations of annual growth rates are made between the 10th-11th years.

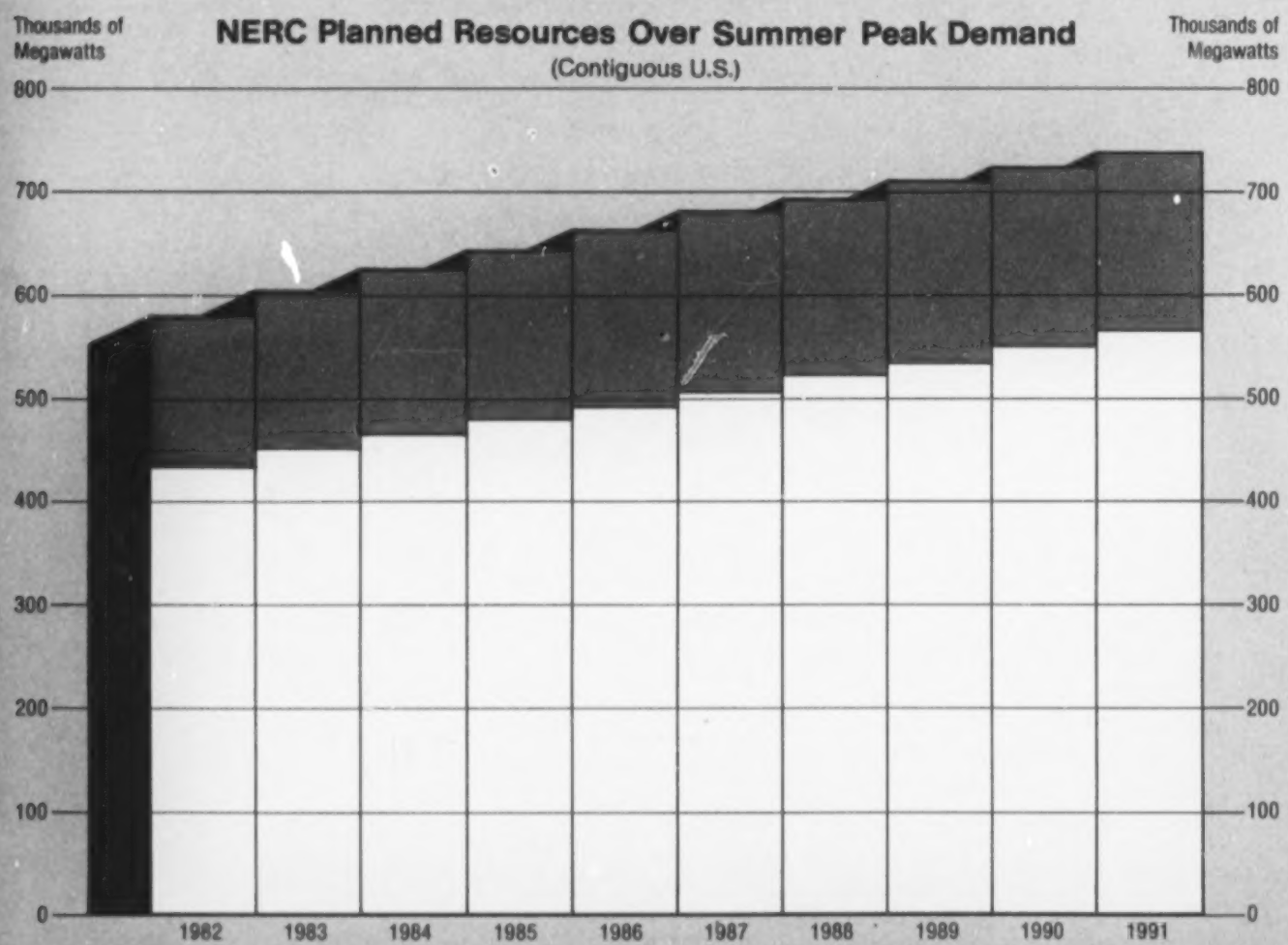
Planned Resources

Planned Resources data include the total installed generating capacity which is existing, presently under construction, or in various stages of planning; plus scheduled capacity purchases, less capacity sales; less total generating capacity out of service in deactivated shutdown status.

The realization of these Resource projections is contingent upon the scheduled completion of that generating capacity which is in various stages of construction, licensing, design or planning.

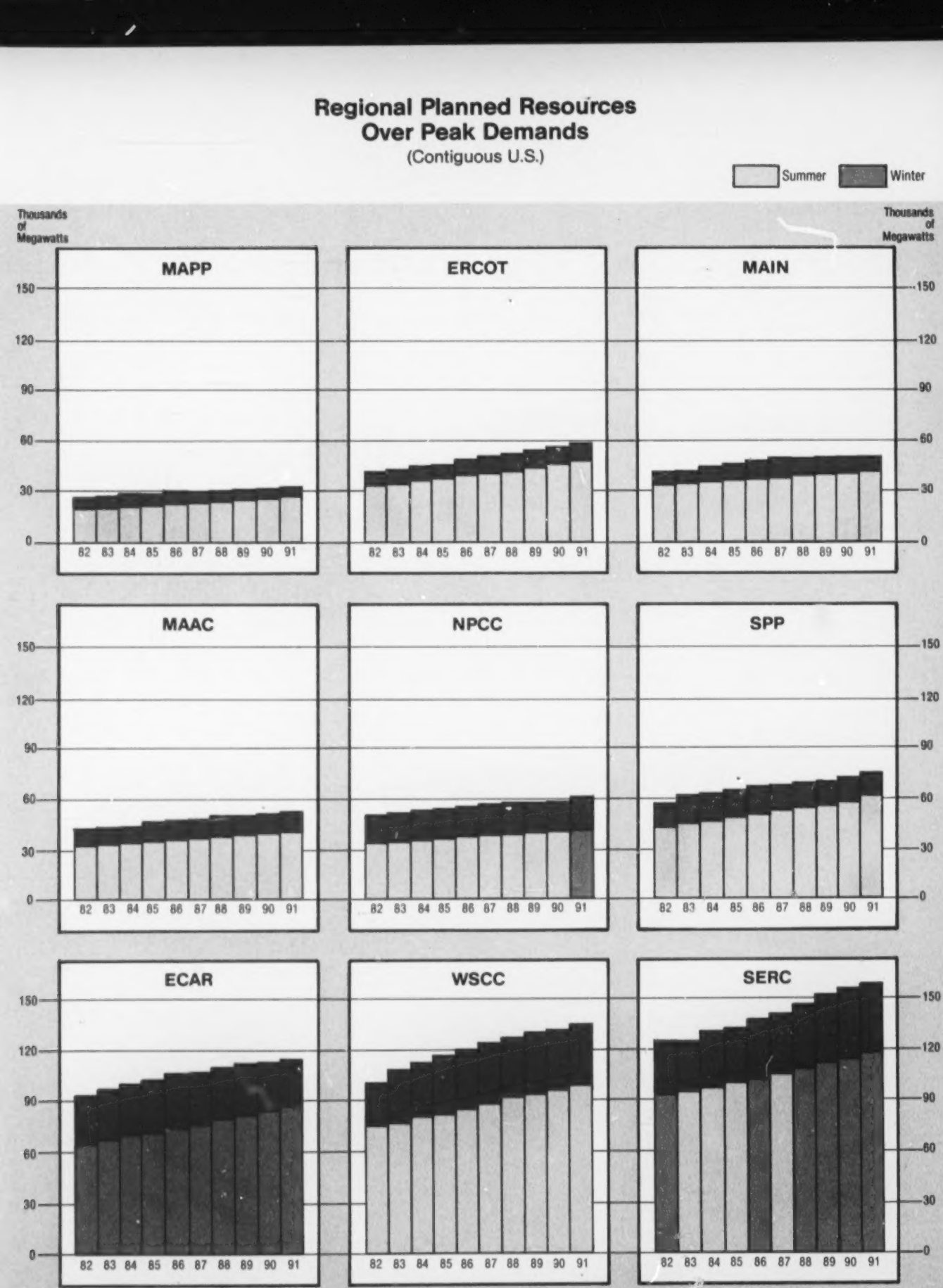
The Projected Peak Demands for the various NERC Regions (Tables 1-3) may occur in different months within a given season. The Planned Resources data of Tables 11-13 correspond with the months of these Projected Peak Demands. In addition to meeting projected peak demand requirements, these resources are needed to provide for scheduled maintenance and emergency outages of generating units, and for system operating requirements.

For a breakdown by principal capacity and fuel types of the installed generating capability included in these Planned Resources data refer to Tables 20 and 21.



Regional Planned Resources Over Peak Demands

(Contiguous U.S.)



Regional: Planned Resources — MW — Summer

TABLE 11

Region	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	88,900	92,440	97,344	100,930	102,912	106,089	108,964	109,922	111,713	112,872
ERCOT	43,434	44,514	46,929	47,017	50,882	51,691	53,439	55,470	57,748	59,387
MAAC	44,818	46,494	46,521	48,644	49,284	49,997	52,308	52,308	52,358	53,177
MAIN	42,863	43,105	46,362	48,160	49,238	51,191	51,874	51,140	51,388	51,777
MAPP—U.S.	28,191	29,328	29,842	29,768	30,715	30,598	30,783	31,893	32,823	33,273
NPCC—U.S.	51,670	52,914	54,144	54,765	56,874	58,518	59,262	59,240	59,700	59,693
SERC	122,136	125,368	130,295	133,737	136,684	141,973	144,171	148,689	151,705	157,334
SPP	58,103	62,159	63,276	65,890	67,349	68,018	69,576	71,688	73,174	76,219
WSCC—U.S.	101,679	109,333	113,564	117,545	120,005	124,323	127,206	130,562	133,853	136,722
NERC—U.S.	581,786	605,655	628,377	646,384	663,335	682,398	696,783	711,824	723,954	746,374
MAPP—Canada	3,988	6,268	6,468	6,544	6,712	6,712	6,712	6,992	6,996	6,996
NPCC—Canada	46,488	48,267	53,101	56,489	57,425	58,237	60,978	64,325	67,546	70,192
WSCC—Canada	14,568	14,987	17,124	17,818	18,825	19,241	19,415	20,667	21,375	21,628
NERC—Total	648,742	675,169	705,072	727,135	746,387	766,588	783,888	803,808	819,771	839,190

Subregional: Planned Resources — MW — Summer

TABLE 11S

Subregion	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	17,768	17,456	19,266	20,391	21,256	22,571	22,259	22,259	22,259	22,259
Missouri	7,437	7,448	8,198	8,072	8,839	8,841	8,236	8,451	8,652	8,654
So. Cent. Ill.	8,446	8,957	9,842	9,730	9,730	10,580	10,580	10,478	10,494	10,869
WUMS	9,212	9,252	9,256	9,967	10,265	9,999	9,999	10,010	9,983	9,995
MAIN	42,863	43,105	46,562	48,160	49,238	51,191	51,874	51,140	51,388	51,777
New York	29,649	31,939	31,970	32,258	32,298	33,932	35,027	35,085	34,917	34,917
New England	21,821	21,379	22,574	22,507	24,586	24,586	24,235	24,235	24,783	24,776
NPCC—U.S.	51,670	52,914	54,144	54,765	56,874	58,518	59,262	59,240	59,700	59,693
New Brunswick	2,769	2,763	2,763	2,763	2,896	2,896	2,896	2,894	2,894	3,189
Ontario	22,143	22,685	24,819	26,124	26,913	27,698	28,612	29,526	30,753	32,925
Québec	21,566	22,819	25,519	27,522	27,624	27,643	29,470	31,985	33,899	35,078
NPCC—Canada	46,488	48,267	53,101	56,489	57,433	58,237	60,978	64,325	67,546	70,192
Florida	25,164	27,983	28,297	30,901	31,400	32,926	33,376	34,220	35,573	36,884
Southern	30,332	29,814	29,783	29,019	29,122	31,072	31,157	33,581	33,637	34,097
TVA	28,240	28,240	30,017	31,419	31,419	32,632	33,845	33,845	33,845	36,363
VACAR	38,400	29,431	42,248	42,398	44,743	45,243	45,793	47,243	48,650	50,970
SERC	122,136	125,368	130,295	133,737	136,684	141,973	144,171	148,689	151,705	157,334
Group A	28,603	28,943	28,427	29,532	30,507	30,973	31,623	32,399	33,634	34,782
Group B	18,260	18,513	18,949	20,459	21,112	21,179	21,469	22,554	22,735	23,671
Group C	14,220	14,703	15,900	15,899	15,880	15,850	16,484	16,647	16,785	17,766
SPP	58,103	62,159	63,276	65,890	67,349	68,018	69,576	71,688	73,174	76,219
NWPP—U.S.	37,210	37,966	39,680	40,734	44,522	47,270	48,198	49,342	50,372	50,432
RMPA	7,439	8,075	8,708	8,712	8,776	9,206	9,643	10,553	10,599	10,599
AZ-NM	11,998	13,119	13,897	14,635	15,679	16,338	16,661	17,884	17,870	18,706
CA-NV	46,600	50,365	51,278	51,462	50,600	51,754	53,207	54,471	54,363	57,625
WSCC—U.S.*	101,679	109,333	113,564	117,545	120,005	124,323	127,206	130,562	133,853	136,722

Regional: Planned Resources — MW — Winter

TABLE 12

Region	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	92,983	97,072	101,686	103,615	107,695	108,832	110,948	113,482	113,988	115,207
ERCOT	42,845	43,955	46,304	47,538	49,958	52,214	53,915	57,493	57,718	58,798
MAAC	48,154	48,633	50,154	51,243	51,575	53,461	54,728	54,728	54,977	55,886
MAIN	43,766	44,769	47,350	50,131	51,236	52,095	51,785	51,684	52,644	52,479
MAPP—U.S.	28,557	29,760	29,597	30,087	30,562	30,481	31,759	31,769	31,877	33,438
NPCC—U.S.	53,059	53,884	55,638	55,540	58,791	60,134	60,210	60,759	60,655	61,363
SERC	125,417	129,127	133,333	137,058	139,721	143,925	147,357	151,794	154,936	159,060
SPP	57,481	61,150	63,984	66,632	67,961	67,694	69,879	72,631	74,741	76,249
WSCC—U.S.	104,091	118,691	114,094	116,814	121,686	125,370	128,706	131,636	133,467	136,571
NERC—U.S.	596,353	619,641	642,140	659,458	679,185	694,214	709,287	725,976	735,003	749,859
MAPP—Canada	6,479	6,479	6,479	6,647	6,743	6,743	6,743	6,873	7,027	7,031
NPCC—Canada	47,928	51,151	55,990	58,390	59,945	61,809	64,706	67,959	71,441	74,450
WSCC—Canada	13,570	14,887	16,127	16,793	17,898	18,415	18,737	19,874	20,287	20,632
NERC—Total	664,330	691,558	720,736	741,288	763,771	781,181	799,473	820,684	833,758	851,172

Subregional: Planned Resources — MW — Winter

TABLE 12S

Subregion	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	18,298	18,706	19,626	22,071	22,966	23,191	22,879	22,879	22,879	22,879
Missouri	7,100	6,815	7,935	8,043	8,008	8,008	8,008	8,038	8,613	8,613
So. Cent. Ill.	8,005	9,755	9,802	9,802	9,802	10,652	10,652	10,544	10,918	10,945
WUMS	9,483	9,493	9,787	10,215	10,460	10,244	10,246	10,223	10,234	10,042
MAIN	43,766	44,769	47,350	50,131	51,236	52,095	51,785	51,684	52,644	52,479
New York	31,005	31,831	32,481	32,558	33,508	35,207	35,283	35,284	35,187	36,037
New England	22,054	22,0[illegible]	23,157	22,982	25,283	24,927	24,927	25,475	25,468	25,326
NPCC—U.S.	53,059	53,[illegible]	55,638	55,540	58,791	60,134	60,210	60,759	60,655	61,363
New Brunswick	2,765	2,763	2,763	2,896	2,896	2,896	2,894	2,894	3,109	3,109
Ontario	22,333	23,166	25,978	26,560	28,093	28,126	29,040	30,969	32,201	32,453
Québec	22,830	25,222	27,249	28,934	28,956	30,787	32,772	34,096	36,131	38,888
NPCC—Canada	47,928	51,151	55,990	58,390	59,945	61,809	64,706	67,959	71,441	74,450
Florida	27,029	29,369	30,496	32,018	33,454	33,926	34,668	35,453	36,765	37,165
Southern	29,300	29,328	28,698	28,966	28,418	30,937	31,964	33,259	33,304	33,503
TVA	30,665	30,065	32,194	32,194	32,194	33,407	34,620	34,620	35,905	37,138
VACAR	38,423	40,365	42,035	44,688	45,655	45,655	46,185	48,462	48,962	51,182
SERC	125,417	129,127	133,333	137,058	139,721	143,925	147,357	151,794	154,936	159,060
Group A	25,625	26,041	28,788	29,980	30,817	30,649	32,117	33,309	34,653	35,272
Group B	17,767	18,115	19,191	20,676	21,185	21,135	21,315	22,518	23,226	23,442
Group C	14,089	14,994	16,005	15,976	15,959	15,918	16,447	16,612	16,862	17,535
SPP	57,481	61,150	63,984	66,632	67,961	67,694	69,879	72,631	74,741	76,249
NWPP—U.S.	39,385	39,796	41,469	44,339	47,650	48,761	49,980	51,003	50,948	52,549
RMPA	7,698	8,624	8,897	8,985	9,802	9,849	10,314	10,802	10,821	10,807
AZ-NM	12,604	12,867	13,940	14,870	15,450	16,153	17,023	17,205	17,572	18,420
CA-NV	44,729	48,983	50,087	48,812	49,626	50,885	51,967	52,865	54,436	55,131
WSCC—U.S.*	104,091	118,691	114,094	116,814	121,686	125,370	128,706	131,636	133,467	136,571

Regional: Planned Resources to Serve Demand for 11 to 20 Year Period — MW[b,c] TABLE 13

Region	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ECAR	120,000	122,800	125,800	129,700	131,400	135,200	138,400	141,700	145,200	148,500
ERCOT	61,212	63,720	65,748	68,318	71,134	73,301	76,401	79,406	81,373	83,974
MAAC	53,695	54,124	53,571	54,621	54,646	56,398	57,164	57,646	58,082	59,355
MAIN	53,768	54,365	54,444	54,892	56,068	57,103	57,613	59,619	60,662	62,227
MAPP—U.S.	33,096	34,060	35,051	36,046	37,150	38,303	39,472	40,674	41,895	43,181
NPCC—U.S.	61,245	61,953	61,730	62,322	62,873	62,747	62,543	62,997	63,436	63,270
SERC	161,465	165,123	169,028	173,990	178,585	182,673	186,207	191,833	195,967	198,787
SPP	78,425	79,597	82,820	84,764	86,606	88,179	91,763	94,515	96,468	98,749
WSCC—U.S.	138,730	140,583	141,622	144,253	146,420	149,543	152,366	154,879	157,679	161,374
NERC—U.S.	761,236	776,325	789,814	808,906	824,882	843,447	861,929	883,269	900,762	919,417
MAPP—Canada	7,723	7,922	8,109	8,344	8,567	8,765	8,945	9,144	9,336	9,539
NPCC—Canada	75,514	77,865	80,471	84,839	88,226	91,169	94,486	98,072	100,514	103,029
WSCC—Canada	21,716	22,341	23,275	24,017	25,086	25,870	27,354	29,450	29,808	30,288
NERC—Total	866,189	884,453	901,669	926,106	946,761	969,251	992,714	1,019,935	1,040,420	1,062,273

Subregional: Planned Resources to Serve Demand for 11 to 20 Year Period — MW[b,c] TABLE 13S

Subregion	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Cmwlth Ed.	22,264	22,264	22,264	22,270	22,625	22,980	23,341	23,996	24,488	24,981
Missouri	9,551	9,557	9,563	9,568	9,975	10,381	10,389	10,970	11,609	11,837
So. Cent. Ill.	10,999	11,589	11,639	11,649	12,049	11,923	11,923	12,323	12,220	12,670
WUMS	10,554	10,955	10,978	11,405	11,419	11,819	11,960	12,330	12,345	12,739
MAIN	53,368	54,365	54,444	54,892	56,068	57,103	57,613	59,619	60,662	62,227
New York	35,767	36,592	36,588	36,588	36,540	36,534	35,730	35,584	35,423	35,257
New England	25,478	25,361	25,142	25,734	26,333	26,213	26,813	27,413	28,013	28,013
NPCC—U.S.	61,245	61,953	61,730	62,322	62,873	62,747	62,543	62,997	63,436	63,270
New Brunswick	3,154	3,154	3,154	3,154	3,454	3,454	3,454	3,454	3,454	3,454
Ontario	34,700	34,983	35,416	36,699	37,582	37,615	38,498	39,348	39,348	39,348
Québec	37,660	39,728	41,901	44,986	47,190	50,100	52,534	55,270	57,712	60,227
NPCC—Canada	75,514	77,865	80,471	84,839	88,226	91,169	94,486	98,072	100,514	103,029
Florida	35,165	36,165	37,265	38,815	40,455	41,155	41,855	43,295	43,995	43,995
Southern	37,337	37,929	39,499	40,628	41,080	43,287	44,664	46,310	47,056	48,607
TVA	37,871	37,871	37,871	37,871	37,871	37,871	37,871	37,871	37,871	37,871
VACAR	51,092	53,158	54,393	56,676	58,379	60,360	61,817	64,357	67,045	68,314
SERC	161,465	165,123	169,028	173,990	178,585	182,673	186,207	191,833	195,967	198,787
Group A	35,879	36,574	36,586	37,971	38,543	39,433	41,028	42,222	43,177	44,931
Group B	24,519	24,612	26,690	26,302	27,584	27,530	28,769	29,000	29,981	29,838
Group C	18,027	18,411	19,624	20,491	20,479	21,216	21,966	23,293	23,310	23,960
SPP	78,425	79,597	82,820	84,764	86,606	88,179	91,763	94,515	96,468	98,749
NWPP—U.S.	52,841	53,366	54,616	55,446	56,046	56,746	57,746	58,746	60,076	61,826
RMPA	11,327	12,215	12,465	12,715	13,365	13,565	14,215	14,765	15,015	15,665
AZ-NM	19,209	19,509	19,859	20,798	21,123	21,758	22,280	22,666	22,961	23,611
CA-NV	56,881	57,109	57,548	57,410	58,062	59,290	60,641	61,618	62,493	63,538
WSCC—U.S.[a]	138,730	140,583	141,622	144,253	146,420	149,543	152,366	154,879	157,679	161,374

Footnotes

a/ Since the subregional peak demands may occur in different months than the coincident total WSCC (U.S.) peak demand, the sum of the individual suregional resources based on those peak demands may not equal the WSCC (U.S.) total.

b/ Regional and subregional resource data are based on the season of greater peak demand, summer or winter. NERC totals represent a non-coincident summation of these data.

c/ Table 13 provides regional estimates of the resources that would be required to supply the projected Peak Demand for the 11-20 Year Period (Table 3) in a reliable manner. In most cases, these estimates were developed solely to satisfy Federal (DOE/EP) reporting requirements. These data are not to be construed as representing capacity plans nor a current commitment to develop or acquire specified capacity resources after 1991.

Planned Resources Growth Rates

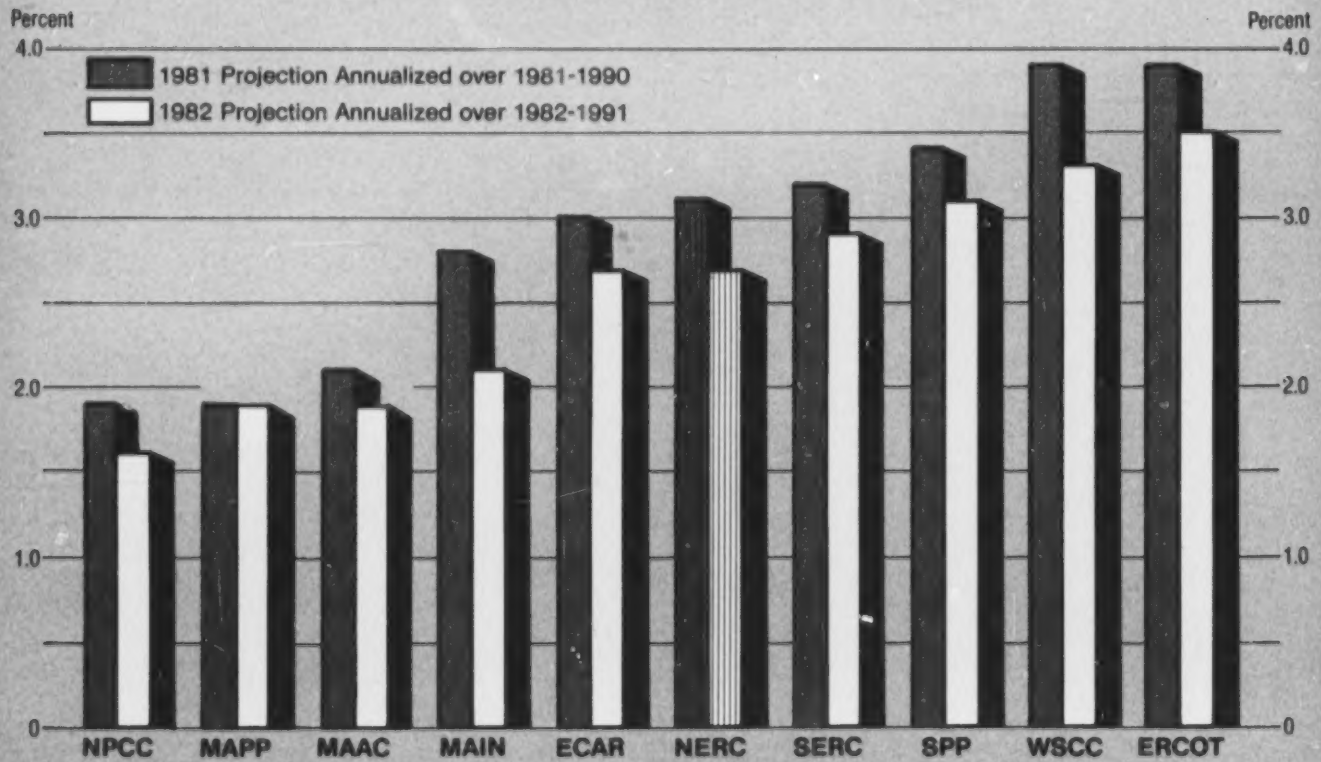
The summer and winter planned resources growth rates of the NERC Regions and Subregions are expressed as a percent in the following tables. The average annual growth rates for the ten-year period are shown in the right-hand column of each table.

To meet forecasted summer peak demands, utilities are planning on resources for 1982-1991 which, in the aggregate for the U.S., result in an average annual growth rate of 2.7%. Last year's projected average annual growth rate for the 1981-1990 period was 3.1%. Winter planned resources for 1982-1991 are projected to increase an average of 2.6% annually.

The summer planned resources growth rates of the NERC Regions in the U.S. range from a low of 1.6% annually, as projected by NPCC, to 3.5% projected by ERCOT.

Subregional summer growth in the U.S. shows an even wider range, from the 0.9% expected by the Wisconsin-Upper Michigan Systems Group (WUMS) of MAIN, to the 5.1% expected by the Arizona-New Mexico Power Area (AZ-NM) of WSCC. NPCC's Canadian Subregion of Quebec is projecting a summer planned resources growth rate of 5.6% for the 1982-1991 period.

Planned Summer Resources Growth Rates
Comparison of 1981 and 1982 Ten-Year Projections
(Contiguous U.S.)



Regional: Planned Resources Growth Rates — Summer — %

TABLE 14

Region	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
ECAR	4.0	5.3	3.6	2.0	3.1	2.7	.9	1.6	1.0	2.7
ERCOT	2.5	5.4	.2	6.5	3.2	3.4	3.8	4.1	2.7	3.5
MAIN	3.8	.1	4.6	1.3	1.4	4.6	.0	.5	1.2	1.9
MAPP—U.S.	.6	8.0	3.4	2.2	4.0	-.2	.1	.5	.8	2.1
NPCC—U.S.	4.0	1.8	-.2	3.2	-.4	.6	3.6	.4	3.9	1.9
SERC	2.4	0.3	1.1	3.9	2.9	1.3	-.0[a]	.8	-.0[a]	1.6
SPP	2.6	3.9	2.7	2.2	3.9	1.5	3.3	1.9	3.7	2.9
WSCC—U.S.	7.0	1.8	4.1	2.5	.7	2.3	2.9	2.2	4.2	3.1
	7.5	3.8	3.6	2.1	3.6	2.3	2.6	2.5	3.1	3.3
NERC—U.S.	4.1	3.8	2.9	2.6	2.9	2.1	2.8	1.8	2.3	2.7
MAPP—Canada	4.7	3.2	1.3	2.6	.0	.0	4.2	.1	.0	1.8
NPCC—Canada	4.0	10.0	6.2	1.8	1.4	4.7	5.5	5.0	3.9	4.7
WSCC—Canada	2.9	14.3	4.1	5.7	2.2	.9	6.4	3.4	1.2	4.5
NERC—Total	4.1	4.4	3.1	2.6	2.7	2.3	2.4	2.1	2.4	2.9

Subregional: Planned Resources Growth Rates — Summer — %

TABLE 14S

Subregion	1982-1983	1983-1984	1984-1985	1985-1986	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1982-1991
Cmwlth Ed.	-1.8	10.4	5.8	4.2	6.2	-1.4	.0	.0	.0	2.5
Missouri	.0	10.2	-1.5	-.4	.0	2.4	2.0	3.0	.0	1.7
So. Cent. Ill.	6.1	9.9	-1.1	.0	8.7	.0	-1.0	.2	3.6	2.8
WUMS	.4	.0	7.7	2.4	-2.0	.0	.1	-.3	.1	.9
MAIN	.6	8.0	3.4	2.2	4.0	-.2	.1	.5	.8	2.1
New York	2.9	.1	2.2	.1	5.1	3.2	-.1	-.3	.0	1.5
New England	1.7	5.6	-.3	9.2	.0	-1.4	.0	2.3	-.0[a]	1.8
NPCC—U.S.	2.4	2.3	1.1	3.9	2.9	1.3	-.0[a]	.8	-.0[a]	1.6
New Brunswick	-.1	.0	.0	4.8	.0	.0	-.1	.0	7.4	1.3
Ontario	2.4	9.4	5.3	3.0	2.9	3.3	3.2	4.2	4.1	4.2
Québec	6.1	11.8	7.8	.4	.1	6.6	8.3	6.2	3.4	5.6
NPCC—Canada	4.0	10.0	6.2	1.8	1.4	4.7	5.5	5.0	3.9	4.7
Florida	10.8	1.2	9.6	1.6	4.9	1.4	2.5	4.0	1.2	4.1
Southern	-1.7	-.1	-2.6	.4	6.7	.3	7.8	.2	1.4	1.3
TVA	.0	6.3	4.7	.0	3.9	3.7	.0	.0	7.4	2.8
VACAR	2.7	7.1	.4	5.5	1.3	1.0	3.2	3.0	4.6	3.2
SERC	2.6	3.9	2.7	2.2	3.9	1.5	3.3	1.9	3.7	2.9
Group A	13.0	-1.8	3.9	3.5	1.4	2.1	2.5	3.9	3.4	3.5
Group B	1.3	2.4	8.0	3.2	.3	1.4	5.1	.8	4.1	2.9
Group C	3.4	8.1	-.0[a]	-.1	-.1	3.3	1.0	.8	5.8	2.5
SPP	7.0	1.8	4.1	2.5	.7	2.3	2.9	2.2	4.2	3.1
NWPP—U.S.	2.0	4.5	2.7	9.2	6.2	2.0	2.4	2.1	.1	3.4
RMPA	8.5	7.8	.0	.7	4.9	4.7	9.4	.3	.1	4.8
AZ-NM	9.3	6.0	5.3	7.1	4.2	2.0	3.7	3.4	4.6	5.1
CA-NV	7.9	1.8	.8	-1.9	2.1	2.8	2.4	3.5	1.2	2.2
WSCC—U.S.	7.5	3.8	3.6	2.1	3.6	2.3	2.6	2.5	3.1	3.3

Regional: Planned Resources Growth Rates — Winter — %

TABLE 15

Region	1982/83-1983/84	1983/84-1984/85	1984/85-1985/86	1985/86-1986/87	1986/87-1987/88	1987/88-1988/89	1988/89-1989/90	1989/90-1990/91	1990/91-1991/92	1982/83-1991/92
ECAR	4.4	4.8	1.9	3.9	1.1	1.9	2.3	.4	1.1	2.4
ERCOT	2.6	5.3	2.7	5.1	4.5	3.3	6.6	.4	1.9	3.6
MAAC	1.0	3.1	2.2	.6	3.7	2.4	.0	.5	1.7	1.7
MAIN	2.3	5.8	5.9	2.2	1.7	-.6	-.2	1.9	-.3	2.0
MAPP—U.S.	4.2	-.5	1.7	1.6	-.3	4.2	.0	.3	4.9	1.8
NPCC—U.S.	1.6	3.3	-.2	5.9	4.3	.1	.9	-.2	1.2	1.6
SERC	3.0	3.3	3.4	1.4	3.0	2.4	3.0	2.1	2.7	2.7
SPP	6.4	4.6	4.1	2.0	-.4	3.2	3.9	2.9	2.0	3.2
WSCC—U.S.	6.3	3.1	2.4	4.2	3.0	2.7	2.3	1.4	2.3	3.1
NERC—U.S.	3.0	3.7	2.7	3.0	2.2	2.2	2.4	1.2	1.9	2.6
MAPP—Canada	.0	.0	2.6	1.4	.0	.0	2.0	2.2	.1	.9
NPCC—Canada	6.7	9.5	4.3	2.7	3.1	4.7	5.0	5.1	4.2	5.0
WSCC—Canada	9.7	8.3	4.1	6.6	2.9	1.7	6.1	2.1	1.7	4.8
NERC—Total	4.1	4.2	2.9	3.0	2.3	2.3	2.7	1.6	2.1	2.8

Subregional: Planned Resources Growth Rates — Winter — %

TABLE 15S

Subregion	1982/83-1983/84	1983/84-1984/85	1984/85-1985/86	1985/86-1986/87	1986/87-1987/88	1987/88-1988/89	1988/89-1989/90	1989/90-1990/91	1990/91-1991/92	1982/83-1991/92
Cmwlth Ed.	2.2	6.0	11.3	4.1	1.0	-1.3	.0	.0	.0	2.5
Missouri	-5.1	16.4	1.4	-.4	.0	.0	.4	7.2	.0	2.0
So. Cent. Ill.	10.8	.5	.0	.0	0.7	.0	-1.0	3.5	.2	2.4
WUMS	.1	3.1	4.4	2.4	-2.1	.0	-.2	.1	-1.9	.6
MAIN	2.3	5.8	5.9	2.2	1.7	-.6	-.2	1.9	-.3	2.0
New York	2.7	2.0	.2	2.9	5.1	.2	.0	-.3	2.4	1.7
New England	-.0[a]	5.0	-.8	10.0	-1.4	.0	2.2	-.0[a]	-.6	1.5
NPCC—U.S.	1.6	3.3	-.2	5.9	2.3	.1	.9	-.2	1.2	1.6
New Brunswick	-.1	.0	4.8	.0	.0	-.1	.0	7.4	.0	1.3
Ontario	3.7	12.1	2.2	5.8	.1	3.2	6.6	4.0	.8	4.2
Québec	10.5	8.0	6.2	.1	6.3	6.4	4.0	6.0	7.6	6.1
NPCC—Canada	6.7	9.5	4.3	2.7	3.1	4.7	5.0	5.1	4.2	5.0
Florida	8.7	3.5	5.3	4.5	1.4	2.2	2.3	3.7	1.1	3.6
Southern	.1	-2.1	.9	-1.9	8.9	3.3	4.1	.1	.8	1.5
TVA	-2.0	7.1	.0	.0	3.8	3.6	.0	3.7	3.4	2.2
VACAR	5.1	4.1	6.3	2.2	.0	1.0	5.1	1.0	4.5	3.2
SERC	3.0	3.3	3.4	1.4	3.0	2.4	3.0	2.1	2.7	2.7
Group A	9.4	2.7	4.1	2.8	-.5	4.8	4.3	3.4	1.8	3.6
Group B	2.0	5.9	7.7	2.5	-.2	.9	5.6	3.2	.9	3.1
Group C	6.4	6.7	-.2	-.1	-.3	3.4	1.0	1.5	4.0	2.5
SPP	6.4	4.6	4.1	2.0	-.4	3.2	3.9	2.9	2.0	3.2
NWPP—U.S.	3.1	4.2	6.9	7.5	2.3	2.5	2.0	-.1	3.2	3.5
RMPA	9.2	3.2	.1	1.1	9.4	4.7	4.7	.2	-.1	3.5
AZ-NM	2.1	8.3	6.7	3.9	4.6	5.4	1.5	1.7	4.8	4.3
CA-NV	9.5	2.1	-2.4	1.7	2.4	2.3	1.7	3.0	1.3	2.4
WSCC—U.S.	6.3	3.1	2.4	4.2	3.0	2.7	2.3	1.4	2.3	3.1

Regional: Planned Resources Growth Rates for 11 to 20 Year Period — %[b,c] TABLE 16

Region	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	1992-2001
ECAR	2.3	2.4	2.1	1.3	2.9	2.4	2.4	2.5	2.3	2.4
ERCOT	4.1	3.2	3.9	4.1	3.0	4.2	3.9	2.5	3.2	3.6
MAAC	.6	-1.0	2.6	.0	2.2	1.4	.6	.6	2.2	1.1
MAIN	1.9	.1	.6	2.1	1.6	.9	3.5	1.7	2.6	1.7
MAPP—U.S.	2.9	2.9	2.6	3.1	3.1	3.1	3.0	3.0	3.1	3.0
NPCC—U.S.	1.2	-.4	1.6	.9	-.2	-.3	.7	.7	-.3	.4
SERC	2.3	2.4	2.9	2.6	2.3	1.9	3.0	2.2	1.4	2.3
SPP	1.5	4.0	2.3	2.2	1.6	4.1	3.0	2.1	2.4	2.6
WSCC—U.S.	1.3	.7	1.9	1.5	2.1	1.9	1.6	1.6	2.3	1.7
NERC—U.S.	2.0	1.7	2.4	2.0	2.3	2.2	2.5	2.0	2.1	2.1
MAPP—Canada	2.6	2.4	2.9	2.7	2.3	2.1	2.2	2.1	2.2	2.4
NPCC—Canada	3.1	3.3	5.4	4.6	3.3	3.6	3.8	2.5	2.5	3.5
WSCC—Canada	2.9	4.2	3.2	4.5	3.1	5.7	7.7	1.2	1.6	3.6
NERC—Total	2.1	1.9	2.7	2.2	2.4	2.4	2.7	2.0	2.1	2.3

Subregional: Planned Resources Growth Rates for 11 to 20 Year Period — %[b,c] TABLE 16S

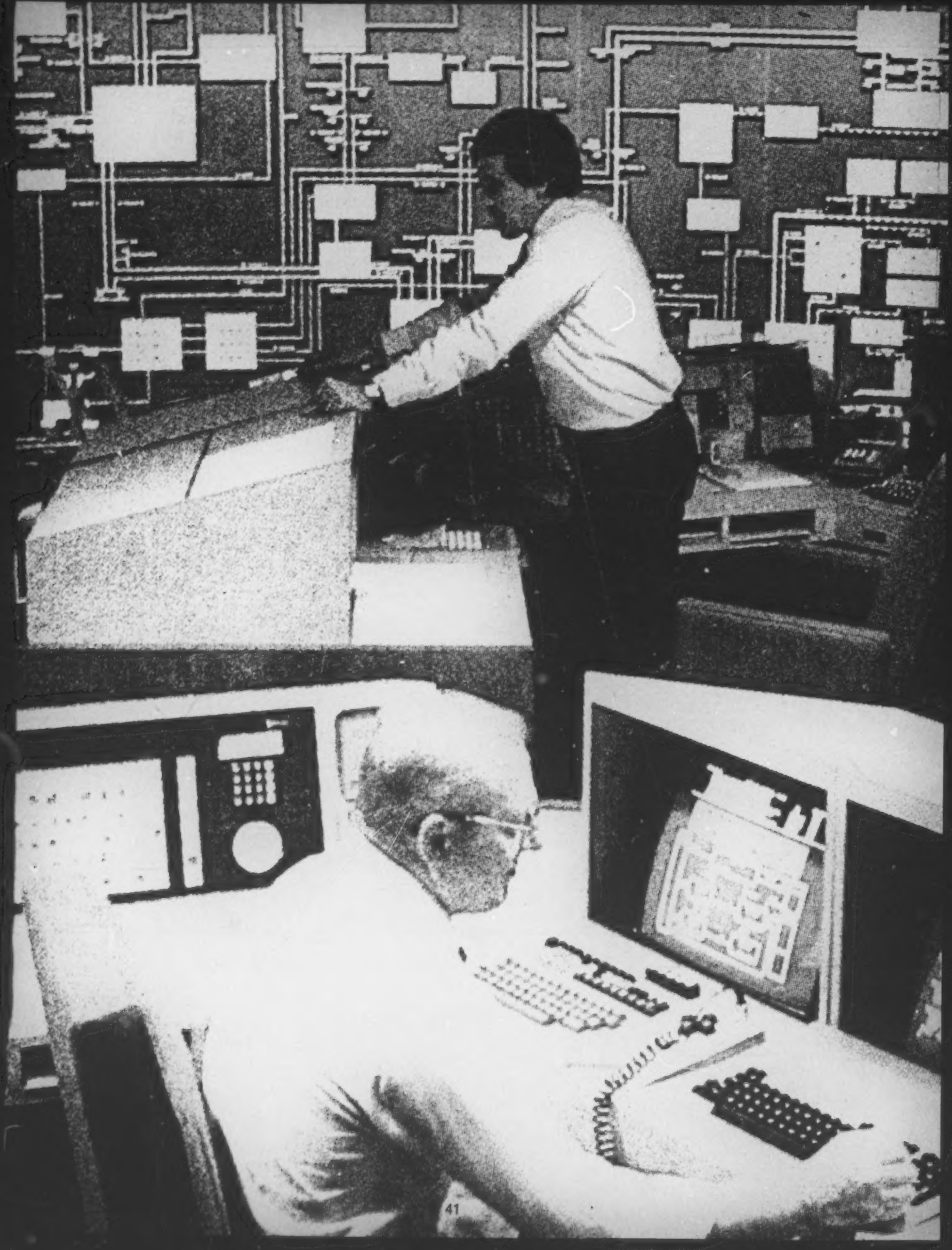
Subregion	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	1992-2001
Cmwlth Ed.	.0	.0	.0	1.6	1.6	1.6	2.0	2.1	2.0	1.3
Missouri	.1	.1	.1	4.3	4.1	.1	5.6	5.8	2.0	2.4
So. Cent. Ill.	5.4	.4	.1	3.4	-1.0	.0	3.4	-.8	3.7	1.6
WUMS	3.8	.2	3.9	.1	3.5	1.2	3.1	.1	3.4	2.1
MAIN	1.9	.1	.6	2.1	1.6	.9	3.5	1.7	2.6	1.7
New York	2.3	-.0[a]	.0	-.1	-.0[a]	-2.2	-.4	-.5	-.5	-.2
New England	-.5	-.9	2.4	2.3	-.5	2.3	2.2	2.2	.0	1.1
NPCC—U.S.	1.2	-.4	1.6	.9	-.2	-.3	.7	.7	-.3	.4
New Brunswick	.0	.0	.0	9.5	.0	.0	.0	.0	.0	1.0
Ontario	.0	1.2	3.6	2.4	.1	2.3	2.2	.0	.0	1.4
Québec	5.5	5.5	7.4	4.9	6.2	4.9	5.2	4.4	4.4	5.4
NPCC—Canada	3.1	3.3	5.4	4.0	3.3	3.6	3.8	2.5	2.5	3.5
Florida	2.8	3.8	4.2	4.2	1.7	1.7	3.4	1.6	.6	2.5
Southern	1.6	4.1	2.9	3.1	3.4	3.2	3.7	1.6	3.3	3.0
TVA	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
VACAR	4.8	2.3	4.2	3.8	3.4	2.4	4.1	4.2	1.9	3.2
SERC	2.3	2.4	2.9	2.6	2.3	1.9	3.0	2.2	1.4	2.3
Group A	1.9	-.2	4.8	1.8	2.3	4.8	2.9	2.3	4.1	2.8
Group B	.4	8.4	-1.2	4.9	-.2	4.2	.8	3.4	-.2	2.2
Group C	2.1	6.6	4.4	-.1	3.6	3.5	6.8	.1	2.8	3.2
SPP	1.5	4.8	2.3	2.2	1.8	4.1	3.8	2.1	2.4	2.6
NWPP—U.S.	1.8	2.3	1.5	1.1	1.2	1.8	1.7	2.3	2.9	1.8
RMPA	7.8	2.8	2.8	3.1	1.3	4.8	3.9	1.7	4.3	3.7
AZ-NM	1.6	1.8	4.7	1.6	3.8	2.4	1.7	1.3	2.8	2.3
CA-NV	.4	.8	-.2	1.8	2.2	2.3	1.6	1.4	1.7	1.2
WSCC—U.S.	1.3	.7	1.9	1.5	2.1	1.9	1.6	1.8	2.3	1.7

Footnotes

a/ ".0%" indicates either no growth or growth too small to show. "-.0%" indicates a decline too small to show.

b/ Regional and subregional resource data are based on the season of greater peak demand, summer or winter.

c/ Table 16 provides data based on regional estimates of the Resources (Table 13) that would be required to supply the projected Peak Demand for the 11 to 20 Year Period (Table 3) in a reliable manner. In most cases, these resource estimates were developed solely to satisfy Federal (DOE/EP) reporting requirements. These data are not to be construed as representing capacity plans nor a current commitment to develop or acquire specified capacity resources after 1991.



Reserve Margins

Reserve Margins shown in the following tables are calculated as the difference between *Planned Resources* (Tables 11-13) and *Projected Peak Demands* (Tables 1-3), expressed as a percent of *Projected Peak Demands*.

Reserve margin expressed as a percent of peak demand is not of itself a sufficient index of power supply adequacy or reliability. The degree of reserves considered adequate varies from region to region due to variations in practices reflecting such things as differences in sizes and types of generating units, the number and capability of transmission interconnections, the geographical extent and configuration of the systems, and pertinent operating agreements among interconnected systems. However, because reserve margin is frequently cited, it is provided here for convenience.

Regional: Reserve Margins — Summer — %

TABLE 17

Region	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	38.2	37.8	38.8	39.9	38.7	38.6	37.5	34.5	33.2	31.0
ERCOT	27.6	25.8	27.7	22.1	24.7	23.3	22.2	21.8	22.2	20.4
MAAC	30.0	32.2	29.6	32.6	31.9	31.8	35.2	32.6	30.7	30.0
MAIN	25.0	22.7	29.2	30.6	30.9	33.2	30.1	27.5	25.3	23.6
MAPP—U.S.	37.8	36.9	33.7	28.2	28.2	24.0	20.9	21.7	18.6	19.7
NPCC—U.S.	44.5	45.5	46.8	45.8	48.4	49.2	48.0	44.9	43.3	40.8
SERC	33.5	31.6	33.2	33.1	32.7	33.9	32.1	32.7	31.8	31.9
SPP	28.5	31.9	29.6	29.9	28.6	25.3	24.1	23.7	22.6	23.9
WSCC—U.S.	30.3	37.6	38.6	39.3	38.1	38.8	37.7	37.5	37.3	36.8
NERC—U.S.	32.8	33.9	34.7	34.5	34.3	34.2	33.0	31.9	30.7	30.1
MAPP—Canada	69.3	70.8	69.1	63.9	57.9	52.6	47.6	49.0	44.3	40.0
NPCC—Canada	65.3	64.6	73.5	76.3	69.1	64.5	65.3	67.2	67.0	66.1
WSCC—Canada	65.8	61.5	71.3	67.6	66.1	62.4	58.5	62.0	61.4	56.6
NERC—Total	35.6	36.5	38.0	37.9	37.3	36.8	35.7	35.0	33.8	33.2

Subregional: Reserve Margins — Summer — %

TABLE 17S

Subregion	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	20.9	15.6	24.3	29.0	32.0	37.6	32.8	30.1	27.5	25.0
Missouri	19.6	17.4	26.6	22.2	19.3	17.8	17.4	17.3	18.4	16.1
So. Cent. Ill.	28.2	31.8	40.4	34.9	32.0	39.5	36.3	31.6	27.9	29.1
WUMS	35.9	34.1	31.4	37.6	37.8	32.4	29.7	26.8	24.1	21.8
MAIN	25.0	22.7	29.2	30.6	30.9	33.2	30.1	27.5	25.3	23.6
New York	44.2	46.2	44.7	45.5	43.2	47.5	49.6	47.2	44.7	42.6
New England	44.9	44.5	49.9	46.1	55.9	51.6	45.6	41.6	41.3	38.3
NPCC—U.S.	44.5	45.5	46.8	45.8	48.4	49.2	48.0	44.9	43.3	40.8
New Brunswick	118.1	109.8	102.6	96.2	99.4	93.7	88.3	82.9	78.0	86.2
Ontario	57.7	56.2	66.1	69.0	68.2	69.3	70.9	72.0	71.8	73.6
Québec	68.5	69.3	78.6	81.9	67.2	57.6	58.4	61.7	62.0	58.3
NPCC—Canada	65.3	64.6	73.5	76.3	69.1	64.5	65.3	67.2	67.0	66.1
Florida	33.1	42.9	38.5	47.1	45.0	48.2	46.8	46.8	48.1	45.8
Southern	38.5	33.1	28.6	21.7	18.4	21.5	18.0	23.6	19.5	17.1
TVA	37.5	27.5	34.0	38.7	37.1	39.7	41.9	38.9	35.6	42.0
VACAR	27.3	26.3	32.6	28.6	32.3	29.9	26.8	26.5	26.0	27.7
SERC	33.5	31.6	33.2	33.1	32.7	33.9	32.1	32.7	31.8	31.9
Group A	29.0	38.8	31.7	31.3	31.0	28.7	27.4	26.7	27.5	27.8
Group B	26.9	24.2	22.5	27.7	27.3	23.3	20.6	22.5	19.7	21.1
Group C	29.7	29.4	35.1	30.3	25.8	21.6	22.5	20.0	17.2	20.5
SPP	28.5	31.9	29.6	29.9	28.6	25.3	24.1	23.7	22.6	23.9
NWPP—U.S.	48.8	48.6	49.9	49.0	57.9	60.8	59.6	59.1	58.4	54.7
RMPA	33.3	34.5	38.1	29.3	22.8	21.8	21.0	26.6	23.0	17.2
AZ-NM	29.8	35.0	37.0	36.8	46.7	39.4	35.4	34.3	33.3	34.4
CA-NV	20.0	28.4	29.5	28.6	24.7	24.7	25.8	26.2	27.8	26.8
WSCC—U.S.	30.3	37.6	38.6	39.3	38.1	38.8	37.7	37.5	37.3	36.8

Regional: Reserve Margins — Winter — %

TABLE 18

Region	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	42.4	41.4	43.5	42.4	43.2	39.7	37.7	37.1	33.9	31.6
ERCOT	67.5	65.0	66.0	63.3	65.0	64.6	63.0	66.8	59.9	55.6
MAAC	57.4	54.7	54.7	53.5	50.5	51.9	51.2	47.4	44.3	43.1
MAIN	56.2	54.6	58.5	62.7	61.6	59.5	54.1	49.6	48.0	43.7
MAPP—U.S.	55.2	55.0	47.2	44.8	42.6	38.1	39.5	35.3	31.2	33.2
NPCC—U.S.	50.4	50.7	53.0	49.6	55.1	54.8	51.5	49.2	45.6	44.2
SERC	36.0	36.2	36.5	37.3	35.4	35.7	34.9	35.0	33.7	33.3
SPP	71.1	75.2	76.6	77.0	74.3	68.0	67.7	69.4	67.5	65.2
WSCC—U.S.	39.1	43.5	42.9	41.4	41.7	41.3	40.5	40.0	38.3	39.7
NERC—U.S.	47.7	48.3	48.9	48.3	49.0	46.6	45.2	44.4	41.9	40.9
MAPP—Canada	39.9	33.7	27.9	23.3	20.6	16.2	12.4	11.2	9.7	6.7
NPCC—Canada	19.7	21.3	26.1	24.9	22.4	20.5	20.6	21.2	22.2	21.9
WSCC—Canada	20.2	22.4	23.7	21.1	21.9	19.8	17.6	20.1	18.0	15.2
NERC—Total	44.5	45.1	46.0	45.2	44.6	43.1	41.7	41.1	39.0	37.9

Subregional: Reserve Margins — Winter — %

TABLE 18S

Subregion	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	62.7	62.9	69.3	84.8	88.5	86.6	80.5	77.0	73.5	70.1
Missouri	57.3	41.6	56.7	51.5	44.2	38.1	32.3	27.3	30.9	25.6
So. Cent. Ill.	56.8	66.6	61.5	55.9	50.8	57.6	52.5	46.8	45.9	41.9
WUMS	44.0	39.6	39.2	40.6	40.0	33.3	29.6	26.0	23.2	17.8
MAIN	56.2	54.6	58.5	62.7	61.6	59.5	54.1	49.6	48.0	43.7
New York	57.7	60.1	60.5	57.5	59.1	63.5	60.0	57.7	54.3	55.2
New England	41.2	38.9	43.7	39.7	50.0	43.9	40.1	38.0	35.1	31.1
NPCC—U.S.	50.4	50.7	53.0	49.6	55.1	54.8	51.5	49.2	45.6	44.2
New Brunswick	63.6	57.5	52.2	54.7	50.1	45.7	41.5	37.7	43.9	40.0
Ontario	27.9	28.2	38.9	37.3	41.7	38.4	39.2	44.5	46.2	42.3
Québec	9.2	12.9	14.1	13.4	6.5	6.3	6.6	4.8	5.3	7.8
NPCC—Canada	19.7	21.3	26.1	24.9	22.4	20.5	20.6	21.2	22.2	21.9
Florida	26.5	33.5	34.3	37.0	39.3	37.5	36.8	35.4	35.3	33.6
Southern	57.3	51.5	43.2	39.3	32.5	39.4	39.0	40.5	35.9	32.6
TVA	38.5	32.9	39.8	38.9	36.8	40.0	42.6	39.9	42.3	43.3
VACAR	27.8	31.0	31.4	35.1	33.5	29.3	26.0	28.0	25.6	27.1
SERC	36.0	36.2	36.5	37.3	35.4	35.7	34.9	35.0	33.7	33.3
Group A	68.2	70.0	75.5	76.4	75.6	69.4	72.4	74.4	75.1	72.0
Group B	71.0	68.0	72.2	79.2	76.8	70.4	65.2	67.8	66.8	62.2
Group C	77.0	79.4	84.6	75.3	68.8	62.4	62.2	58.3	54.5	55.5
SPP	71.1	75.2	76.6	77.0	74.3	68.0	67.7	69.4	67.5	65.2
NWPP—U.S.	16.6	16.1	16.6	20.8	25.5	24.0	23.6	22.6	19.3	23.2
RMPA	40.2	44.7	41.0	32.1	26.0	32.3	30.2	31.4	26.8	24.8
AZ-NM	88.4	84.2	88.7	92.6	90.5	84.4	90.1	85.0	80.6	83.1
CA-NV	48.5	60.2	62.3	55.2	51.9	52.0	51.4	50.9	52.8	51.7
WSCC—U.S.	39.1	43.5	42.9	41.4	41.7	41.3	40.5	40.0	38.3	39.7

Regional: Reserve Margins for 11 to 20 Year Period — %

TABLE 19

Region	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
ECAR	31.9	31.3	30.9	31.3	29.5	29.9	29.5	29.2	29.1	28.6
ERCOT	20.8	19.8	19.2	19.5	20.0	19.1	19.6	19.9	18.6	18.0
MAAC	29.0	27.8	24.4	24.8	22.9	24.8	24.8	24.0	23.2	24.1
MAIN	22.8	22.3	19.9	18.1	17.9	17.4	15.8	17.2	16.2	16.4
MAPP—U.S.	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
NPCC—U.S.	36.4	35.6	32.7	32.0	30.8	28.7	26.1	24.9	24.0	21.9
SERC	25.4	24.1	23.1	22.7	22.1	21.1	19.7	19.5	18.3	16.3
SPP	23.6	21.7	22.9	21.9	20.7	19.0	20.0	19.7	18.3	17.1
WSCC—U.S.	34.7	33.3	31.1	30.4	29.1	28.7	27.7	26.7	25.8	25.4
NERC—U.S.	27.7	26.7	25.5	25.1	24.1	23.5	22.8	22.5	21.6	20.8
MAPP—Canada	12.2	12.2	12.2	12.2	12.1	12.1	12.1	12.1	12.1	12.1
NPCC—Canada	13.6	12.2	11.0	12.2	12.1	11.5	11.3	11.6	10.8	10.1
WSCC—Canada	12.4	10.9	10.8	9.0	9.3	8.6	10.2	14.2	11.5	9.3
NERC—Total	25.8	24.7	23.5	23.2	22.3	21.7	21.1	21.0	20.1	19.2

Subregional: Reserve Margins for 11 to 20 Year Period — %

TABLE 19S

Subregion	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Cmwlth Ed.	22.5	20.2	18.0	15.6	15.0	14.5	14.0	14.9	15.1	15.2
Missouri	24.7	22.0	19.1	16.2	18.1	19.6	16.3	19.7	20.5	18.8
So. Cent. Ill.	26.7	30.3	27.8	24.9	26.0	21.8	18.9	20.0	16.2	17.6
WUMS	17.7	19.1	16.6	18.4	15.8	17.1	15.9	16.8	14.5	15.5
MAIN	22.8	22.3	19.9	18.1	17.9	17.4	15.8	17.2	16.2	16.4
New York	42.7	43.7	41.2	39.0	36.5	34.4	29.2	26.2	23.5	20.7
New England	28.5	25.4	22.0	23.2	23.6	21.5	22.2	23.3	24.7	23.5
NPCC—U.S.	36.4	35.6	32.7	32.0	30.8	28.7	26.1	24.9	24.0	21.9
New Brunswick	42.1	38.3	34.6	31.1	39.9	36.3	32.8	29.5	26.2	22.9
Ontario	37.4	34.4	32.8	32.9	32.7	29.9	30.1	30.3	27.8	25.3
Québec	-3.4	-3.3	-3.2	-1.3	-1.5	-.4	-.3	.5	.9	1.4
NPCC—Canada	13.6	12.2	11.0	12.2	12.1	11.5	11.3	11.6	10.8	10.1
Florida	19.1	18.4	18.9	19.9	21.6	20.2	18.8	19.4	17.9	14.5
Southern	23.1	21.1	22.2	21.8	21.8	22.0	22.1	22.8	20.9	21.0
TVA	43.7	39.2	34.8	36.8	27.4	24.1	20.8	17.5	13.8	10.8
VACAR	20.8	20.7	19.4	20.2	19.4	19.2	17.9	18.5	19.3	17.4
SERC	25.4	24.1	23.1	22.7	22.1	21.1	19.7	19.5	18.3	16.3
Group A	27.4	26.1	22.1	23.0	21.0	20.0	21.0	20.7	19.6	20.8
Group B	22.9	19.9	26.2	20.7	22.7	18.7	20.1	17.3	17.5	13.3
Group C	17.3	16.2	20.0	21.4	17.5	17.7	17.9	20.9	16.9	15.4
SPP	23.6	21.7	22.9	21.9	20.7	19.0	20.0	19.7	18.3	17.1
NWPP—U.S.	21.1	19.4	19.2	18.2	16.6	15.1	14.1	13.2	12.7	12.9
RMPA	21.6	26.1	22.7	21.2	20.9	17.8	18.5	18.3	15.5	15.8
AZ-NM	29.3	27.0	25.1	26.7	25.0	24.7	23.7	22.1	20.0	19.7
CA-NV	22.3	20.6	19.3	16.7	15.4	15.5	15.4	14.8	14.0	13.4
WSCC—U.S.	34.7	33.3	31.1	30.4	29.1	28.7	27.7	26.7	25.8	25.4

Installed Generating Capability

by Principal Fuel Type

Installed Generating Capability data provide a breakdown by principal capacity and fuel types of the total installed generating capacity which is existing, presently under construction, or in various stages of planning; plus equipment upratings, less deratings; less equipment removals.

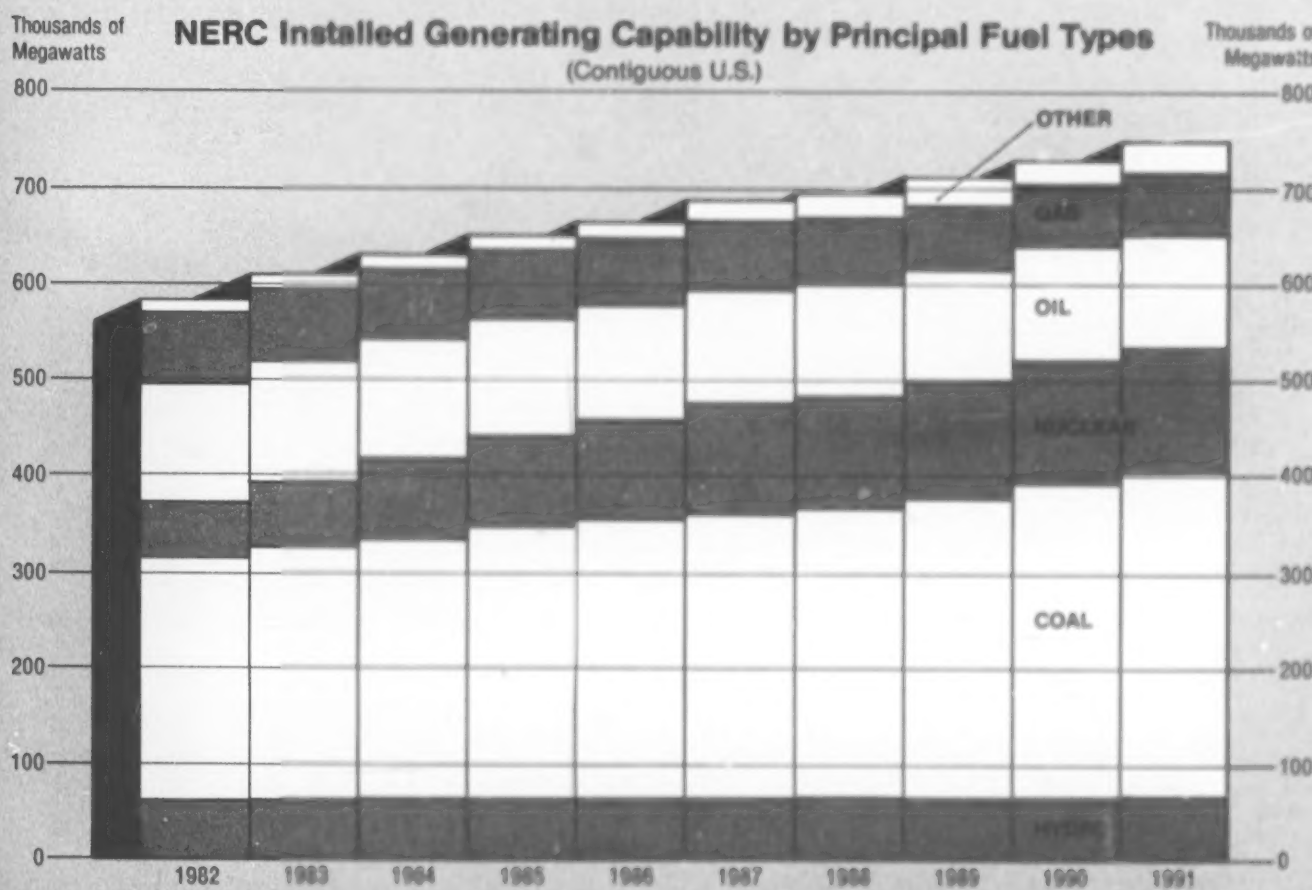
The realization of these Installed Generating Capability projections is contingent upon the scheduled completion of that generating capacity which is in various stages of construction, licensing, design or planning.

The Projected Peak Demands as tabulated for the various NERC Regions (Tables 1-3) may occur in different months within a given season. These Installed Generating Capability data of Tables 20 & 21 correspond with the months of these Projected Peak Demands, and are based on seasonal ratings.

The projected changes in the relative contributions of the fuel types to total installed generating capability in the U.S. (figure below) are as follows: *Gas* dropping from 12.4% in 1982 to 9.1% in 1991; *Oil* decreasing from 21.3% in 1982 to 15.1% in 1991; *Nuclear* climbing from 9.9% in 1982 to 17.0% in 1991; *Coal* rising from 43.3% in 1982 to 45.7% in 1991; and *Hydro* declining from 10.6% in 1982 to 9.1% in 1991.

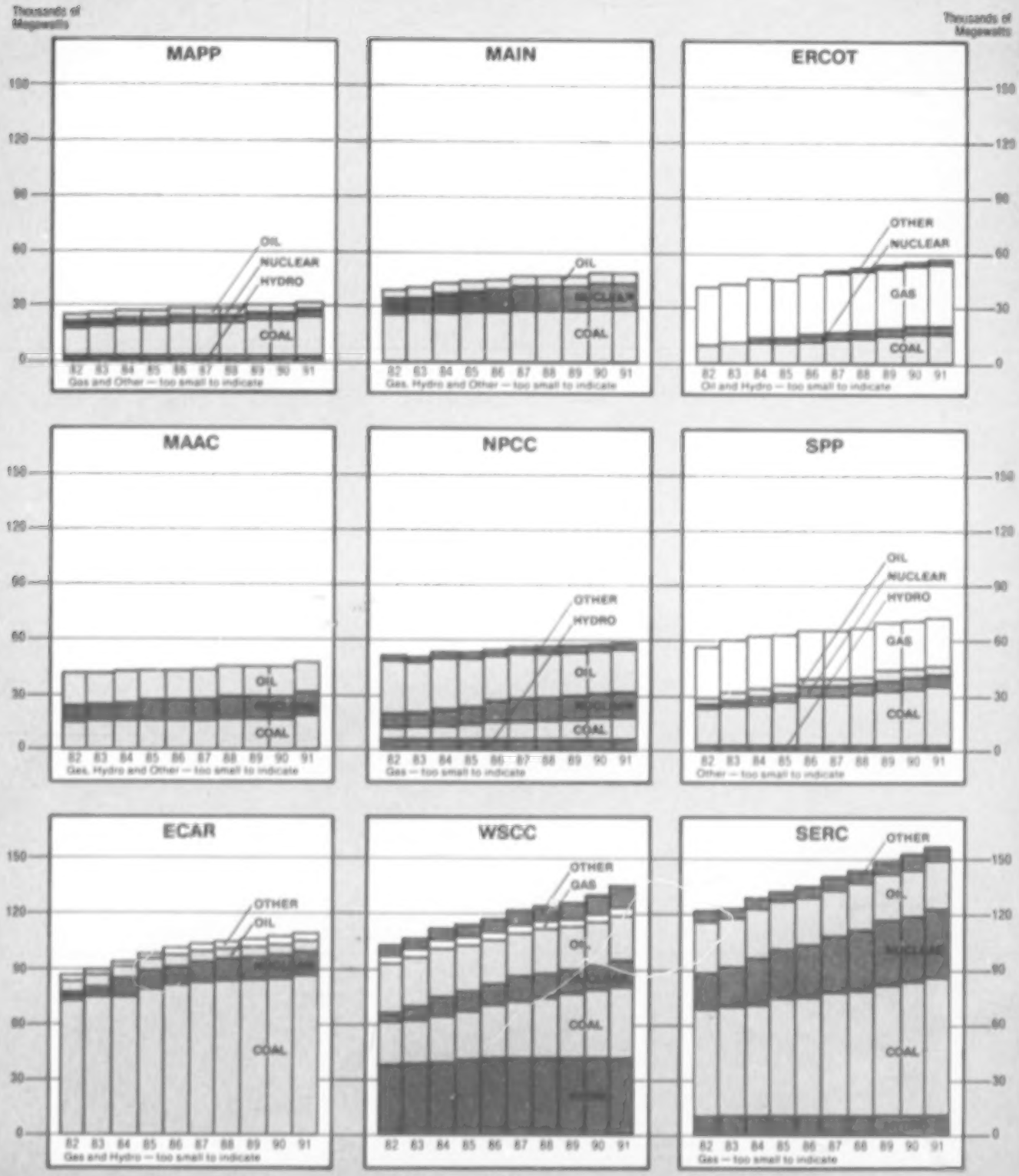
For tabulations of the total planned resources, which include scheduled capacity purchases and sales in addition to installed generating capability, refer to Tables 11-13.

Net Change in Summer Installed Capability (U.S.) 1982-1991	
Nuclear	116.9%
Coal	34.0%
Hydro	9.0%
Gas	−7.0%
Oil	−9.5%



Regional Installed Generating Capability by Principal Fuel Types

(Summer — Contiguous U.S.)



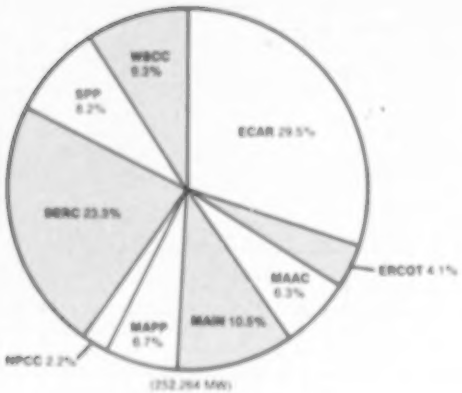
Installed Generating Capability by Principal Fuel Types by NERC (U.S.) Region

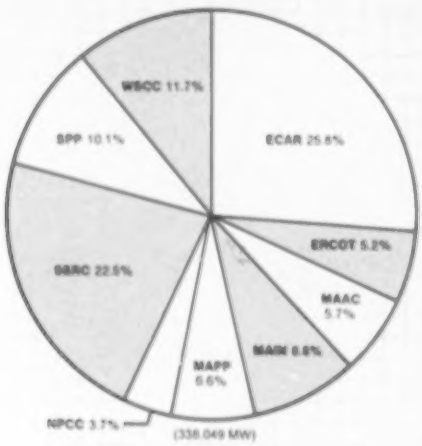
(Summer)

1982

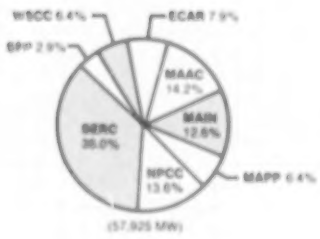
1991

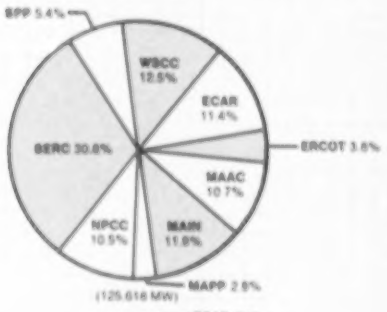
COAL



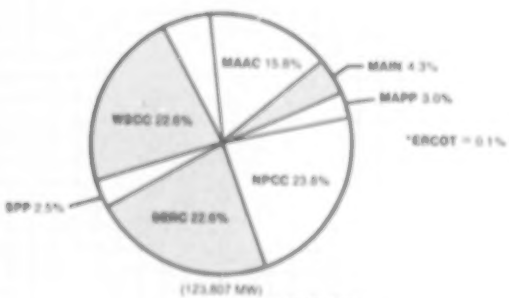


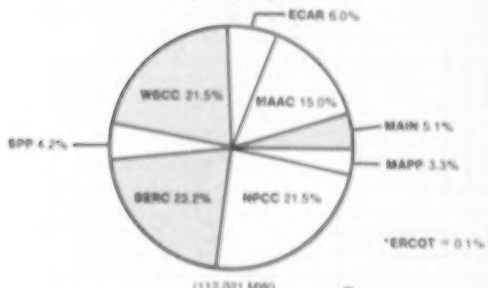
NUCLEAR



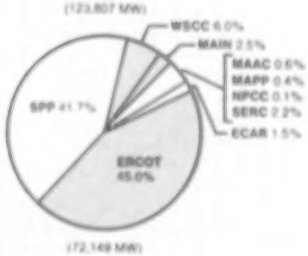


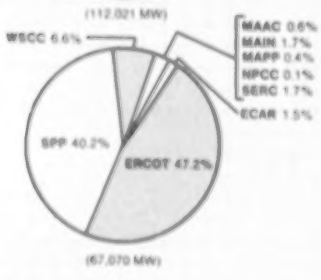
OIL



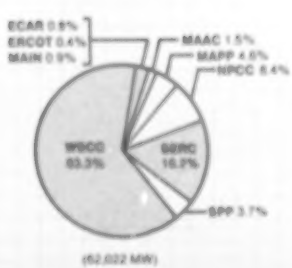


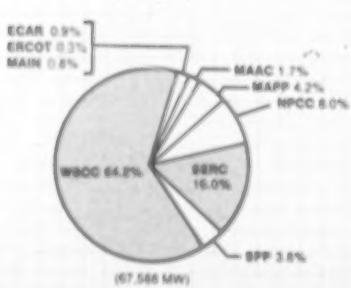
GAS





HYDRO





*Too small to indicate

Regional: Installed Generating Capability — Summer — MW

TABLE 20

NUCLEAR

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	4,576	4,576	5,320	9,555	10,060	10,880	12,010	13,684	13,684	14,335	14,335
ERCOT	0	0	0	2,400	2,400	4,800	4,800	4,800	4,800	4,800	4,800
MAAC	7,092	8,198	9,248	9,248	11,353	11,353	12,420	13,475	13,475	13,475	13,475
MAIN	6,278	7,326	7,326	11,564	12,684	13,774	14,864	14,864	14,894	14,894	14,894
MAPP—U.S.	3,713	3,693	3,693	3,693	3,693	3,693	3,693	3,693	3,693	3,648	3,648
NPCC—U.S.	7,822	7,903	8,715	9,865	9,865	12,165	13,245	13,245	13,245	13,245	13,245
SERC	17,606	20,844	22,671	26,173	27,350	29,395	31,834	33,172	35,298	36,205	38,723
SPP	1,694	1,694	3,892	4,870	4,870	5,744	5,744	5,744	6,838	6,838	6,838
WSCC—U.S.	2,685	3,691	7,974	10,108	10,575	12,808	14,385	14,385	14,385	14,385	15,660
NERC—U.S.	51,466	57,925	68,839	87,476	92,850	104,612	112,995	117,062	120,312	121,825	125,618
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	5,248	5,878	6,394	9,047	10,079	10,829	11,579	12,460	13,341	14,222	15,103
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	56,714	63,803	75,233	96,523	102,929	115,441	124,574	129,522	133,653	136,047	140,721

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

NUCLEAR

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	4,778	5,826	5,826	7,994	9,114	10,204	11,294	11,294	11,294	11,294	11,294
Missouri	0	0	0	1,120	1,120	1,120	1,120	1,120	1,150	1,150	1,150
So. Cent. Ill.	0	0	0	950	950	950	950	950	950	950	950
WUMS	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
MAIN	6,278	7,326	7,326	11,564	12,684	13,774	14,864	14,864	14,894	14,894	14,894
New York	3,594	3,704	4,513	4,513	4,513	4,513	5,593	5,593	5,593	5,593	5,593
New England	4,228	4,199	4,202	5,352	5,352	7,652	7,652	7,652	7,652	7,652	7,652
NPCC—U.S.	7,822	7,903	8,715	9,865	9,865	12,165	13,245	13,245	13,245	13,245	13,245
New Brunswick	0	630	630	630	630	630	630	630	630	630	630
Ontario	5,248	5,248	5,764	7,780	8,812	9,562	10,312	11,193	12,074	12,955	13,836
Québec	0	0	0	637	637	637	637	637	637	637	637
NPCC—Canada	5,248	5,878	6,394	9,047	10,079	10,829	11,579	12,460	13,341	14,222	15,103
Florida	2,915	2,915	3,717	3,717	3,717	3,717	3,792	3,792	3,867	3,867	3,867
Southern	2,344	3,168	3,293	3,293	3,293	3,293	4,444	4,569	5,720	5,720	5,720
TVA	4,323	5,451	5,451	6,628	7,805	7,805	9,018	10,231	10,231	10,231	12,749
VACAR	8,024	9,310	10,210	12,535	12,535	14,580	14,580	14,580	15,480	16,387	16,387
SERC	17,606	20,844	22,671	26,173	27,350	29,395	31,834	33,172	35,298	36,205	38,723
Group A	1,694	1,694	3,892	3,892	3,892	4,766	4,766	4,766	5,860	5,860	5,860
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	978	978	978	978	978	978	978	978
SPP	1,694	1,694	3,892	4,870	4,870	5,744	5,744	5,744	6,838	6,838	6,838
NWPP—U.S.	1,080	1,080	1,080	2,180	2,180	3,430	4,670	4,670	4,670	4,670	4,670
RMPA	330	200	200	200	200	275	275	275	275	275	275
AZ-NM	0	0	784	1,484	1,828	2,528	2,742	2,742	2,742	2,742	2,742
CA-NV	1,275	3,495	5,910	6,244	6,367	6,575	6,698	6,698	6,698	6,698	6,698
WSCC—U.S.	2,685	3,691	7,974	10,108	10,575	12,808	14,385	14,385	14,385	14,385	15,660

Regional: Installed Generating Capability — Summer — MW

TABLE 20

HYDRO [a]	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	561	561	601	601	601	601	601	601	601	601	601
ERCOT	230	230	230	230	230	230	230	230	230	230	230
MAAC	956	956	957	957	957	1,147	1,147	1,147	1,147	1,147	1,147
MAIN	573	570	570	571	571	572	572	572	573	573	574
MAPP—U.S.	2,960	2,874	2,854	2,854	2,889	2,887	2,782	2,840	2,840	2,842	2,842
NPCC—U.S.	5,186	5,224	5,250	5,297	5,325	5,355	5,357	5,376	5,419	5,428	5,428
SERC	10,070	10,032	10,160	10,326	10,642	10,742	10,742	10,742	10,809	10,809	10,809
SPP	2,224	2,310	2,424	2,484	2,544	2,544	2,544	2,544	2,544	2,544	2,544
WSCC—U.S.	43,401 [b]	39,265	39,858	40,241	41,841	42,208	42,502	42,787	43,123	43,302	43,413
NERC—U.S.	66,161	62,022	62,904	63,561	65,600	66,286	66,477	66,839	67,286	67,476	67,588
MAPP—Canada	4,178	4,178	4,178	4,178	4,262	4,430	4,430	4,430	4,430	4,430	4,430
NPCC—Canada	23,642	24,317	25,304	27,387	29,580	29,588	29,602	29,602	30,077	31,978	33,388
WSCC—Canada	9,142	9,142	9,142	10,942	10,959	10,959	11,073	11,258	12,069	12,231	12,231
NERC—Total	103,123	99,659	101,528	106,068	110,401	111,263	111,582	112,129	113,862	116,115	117,637

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

HYDRO [a]	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	331	331	331	331	331	331	331	331	331	331	331
So. Cent. Ill.	2	2	2	2	2	2	2	2	2	2	2
WUMS	240	237	237	238	238	239	239	239	240	240	241
MAIN	573	570	570	571	571	572	572	572	573	573	574
New York	3,937	3,937	3,955	3,986	4,005	4,035	4,035	4,054	4,097	4,106	4,106
New England	1,249	1,287	1,295	1,311	1,320	1,320	1,322	1,322	1,322	1,322	1,322
NPCC—U.S.	5,186	5,224	5,250	5,297	5,325	5,355	5,357	5,376	5,419	5,428	5,428
New Brunswick	812	812	812	812	812	812	812	812	812	812	812
Ontario	6,132	6,136	6,164	6,185	6,201	6,209	6,209	6,209	6,209	6,522	6,880
Québec	16,698	17,369	18,328	20,390	22,567	22,567	22,581	22,581	23,056	24,644	25,696
NPCC—Canada	23,642	24,317	25,304	27,387	29,580	29,588	29,602	29,602	30,077	31,978	33,388
Florida	36	36	36	47	47	47	47	47	47	47	47
Southern	3,256	3,223	3,340	3,455	3,621	3,721	3,721	3,721	3,788	3,788	3,788
TVA	4,306	4,306	4,306	4,306	4,306	4,306	4,306	4,306	4,306	4,306	4,306
VACAR	2,472	2,467	2,478	2,518	2,668	2,668	2,668	2,668	2,668	2,668	2,668
SERC	10,070	10,032	10,160	10,326	10,642	10,742	10,742	10,742	10,809	10,809	10,809
Group A	69	69	69	69	69	69	69	69	69	69	69
Group B	2,139	2,225	2,339	2,399	2,459	2,459	2,459	2,459	2,459	2,459	2,459
Group C	16	16	16	16	16	16	16	16	16	16	16
SPP	2,224	2,310	2,424	2,484	2,544	2,544	2,544	2,544	2,544	2,544	2,544
NWPP—U.S.	32,376 [b]	28,661	28,783	28,710	28,844	30,682	30,649	30,680	30,616	30,758	30,793
RMPA	2,158	2,161	2,161	2,176	2,188	2,191	2,213	2,230	2,230	2,270	2,270
AZ-NM	654	643	649	649	649	649	649	649	649	649	649
CA-NV	8,346	8,001	8,523	8,806	8,744	9,091	9,266	9,578	9,647	9,977	10,035
WSCC—U.S.	43,401 [b]	39,265	39,858	40,241	41,841	42,208	42,502	42,787	43,123	43,302	43,413

Regional: Installed Generating Capability — Summer — MW

TABLE 20

PUMPED STORAGE

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	2,767	2,767	2,767	2,767	2,767	3,187	3,607	3,607	3,607	3,607	3,607
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280
MAIN	300	300	300	300	300	300	300	300	300	300	300
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	2,631	2,631	2,631	2,631	2,631	2,631	2,631	3,631	3,631	3,631	3,631
SERC	2,929	2,910	2,910	2,910	2,910	3,584	5,060	5,060	5,060	5,560	6,060
SPP	260	260	260	260	260	260	260	260	260	260	260
WSCC—U.S.	2,002	1,929	2,834	2,935	2,934	2,934	2,932	2,950	2,871	2,871	3,021
NERC—U.S.	12,169	12,077	12,982	13,083	13,082	14,176	16,070	17,088	17,009	17,509	18,159
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	422	1,477	1,477	1,477
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	12,169	12,077	12,982	13,083	13,082	14,176	16,070	17,510	18,486	18,986	19,636

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

PUMPED STORAGE

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	300	300	300	300	300	300	300	300	300	300	300
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	300	300	300	300	300	300	300	300	300	300	300
New York	1,000	1,000	1,000	1,000	1,000	1,000	1,000	2,000	2,000	2,000	2,000
New England	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631
NPCC—U.S.	2,631	2,631	2,631	2,631	2,631	2,631	2,631	3,631	3,631	3,631	3,631
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	422	1,477	1,477	1,477
NPCC—Canada	0	0	0	0	0	0	0	422	1,477	1,477	1,477
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	507	488	488	488	488	562	1,438	1,438	1,438	1,438	1,438
TVA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
VACAR	1,122	1,122	1,122	1,122	1,122	1,722	2,322	2,322	2,322	2,822	3,322
SERC	2,929	2,910	2,910	2,910	2,910	3,584	5,060	5,060	5,060	5,560	6,060
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	260	260	260	260	260	260	260	260	260	260	260
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	260	260	260	260	260	260	260	260	260	260	260
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	162	262	262	362	362	362	362	362	362	362	362
AZ-NM	137	137	137	137	137	137	137	137	137	137	287
CA-NV	1,703	1,486	2,399	2,400	2,398	2,395	2,387	2,451	2,367	2,372	2,372
WSCC—U.S.	2,002	1,929	2,834	2,935	2,934	2,934	2,932	2,950	2,871	2,871	3,021

Regional: Installed Generating Capability — Summer — MW

TABLE 20

GEOTHERMAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	909	908	1,284	1,554	1,816	1,976	2,133	2,455	2,745	3,025	3,185
NERC—U.S.	909	908	1,284	1,554	1,816	1,976	2,133	2,455	2,745	3,025	3,185
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	909	908	1,284	1,554	1,816	1,976	2,133	2,455	2,745	3,025	3,185

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

GEOTHERMAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP—U.S.	0	0	0	20	20	20	20	20	20	20	20
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	50	50	50	100	100	150	150	200	200
CA-NV	909	908	1,234	1,484	1,746	1,856	2,013	2,285	2,575	2,805	2,965
WSCC—U.S.[a]	909	908	1,284	1,554	1,816	1,976	2,133	2,455	2,745	3,025	3,185

Regional: Installed Generating Capability — Summer — MW

TABLE 20

STEAM — COAL[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	74,030	74,470	76,574	76,504	80,243	81,422	83,050	84,250	84,900	86,041	87,291
ERCOT	10,245	10,245	11,185	11,185	11,185	11,985	13,050	14,612	16,362	17,674	17,674
MAAC	15,068	15,937	16,601	17,221	17,256	17,261	17,436	18,056	18,056	18,382	19,284
MAIN	25,958	26,433	27,038	27,053	27,989	27,989	28,849	28,849	28,714	29,289	29,639
MAPP—U.S.	16,721	16,871	18,204	18,787	18,787	19,616	19,615	19,675	20,795	20,974	22,193
NPCC—U.S.	4,350	5,435	6,361	6,851	8,757	9,917	10,748	10,997	11,606	12,360	12,360
SERC	56,086	58,717	60,968	62,717	65,136	66,423	68,094	69,105	71,691	73,148	75,922
SPP	17,264	20,652	22,522	22,752	25,162	26,292	26,805	28,235	29,425	30,784	34,237
WSCC—U.S.	22,173	23,504	24,770	26,090	27,816	29,236	31,076	33,006	35,993	38,385	39,449
NERC—U.S.	243,495	252,264	264,223	269,160	282,331	290,041	298,723	306,785	317,542	327,037	338,049
MAPP—Canada	1,679	1,679	1,959	1,959	1,959	1,959	1,959	1,959	2,239	2,333	2,333
NPCC—Canada	9,398	9,799	9,799	9,799	10,005	10,005	10,005	10,005	10,005	10,005	10,005
WSCC—Canada	3,339	3,339	3,716	4,093	4,819	5,905	6,265	6,265	6,765	7,265	7,625
NERC—Total	256,111	267,081	279,697	285,011	299,114	307,910	316,952	325,014	336,551	346,640	358,012

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

STEAM — COAL[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	6,922	6,922	6,922	6,922	6,922	6,922	6,922	6,922	6,922	6,922	6,922
Missouri	5,526	5,585	5,585	5,585	5,585	5,585	5,585	5,585	5,585	6,160	6,160
So. Cent. Ill.	7,507	7,625	8,190	8,205	8,205	8,205	9,055	9,055	8,920	8,920	9,270
WUMS	6,003	6,301	6,341	6,341	7,277	7,277	7,287	7,287	7,287	7,287	7,287
MAIN	25,958	26,433	27,038	27,053	27,989	27,989	28,849	28,849	28,714	29,289	29,639
New York	3,390	3,367	4,293	4,489	5,796	6,531	7,362	7,611	8,220	8,406	8,406
New England	960	2,068	2,068	2,362	2,961	3,386	3,386	3,386	3,386	3,954	3,954
NPCC—U.S.	4,350	5,435	6,361	6,851	8,757	9,917	10,748	10,997	11,606	12,360	12,360
New Brunswick	282	282	282	282	282	282	282	282	282	282	282
Ontario	9,316	9,517	9,517	9,517	9,723	9,723	9,723	9,723	9,723	9,723	9,723
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	9,598	9,799	9,799	9,799	10,005	10,005	10,005	10,005	10,005	10,005	10,005
Florida	2,455	3,024	4,289	4,608	6,373	7,315	8,280	8,880	9,380	10,980	11,280
Southern	19,652	20,606	20,606	21,414	22,068	22,068	22,774	22,735	24,071	24,228	24,882
TVA	16,217	16,217	16,217	16,217	16,217	16,217	16,217	16,217	16,217	16,217	16,217
VACAR	18,562	18,870	19,856	20,478	20,478	20,823	20,823	21,273	21,823	21,823	23,543
SERC	56,086	58,717	60,968	62,717	65,136	66,423	68,094	69,105	71,691	73,148	75,922
Group A	2,279	3,602	4,867	4,867	5,614	5,934	6,447	7,247	7,247	8,547	9,859
Group B	5,824	7,236	7,236	7,236	8,899	9,709	9,709	9,709	10,809	10,808	12,009
Group C	9,161	9,814	10,419	10,649	10,649	10,649	10,649	11,279	11,369	11,429	12,369
SPP	17,264	20,652	22,522	22,752	25,162	26,292	26,805	28,235	29,425	30,784	34,237
NWPP—U.S.	8,376	8,501	8,901	9,601	10,526	11,226	11,542	11,857	12,933	13,756	13,756
RMPA	3,930	4,670	5,307	5,732	5,732	5,732	6,147	6,377	7,484	7,484	7,484
AZ-NM	5,967	6,337	6,429	6,667	7,050	7,617	8,115	8,115	8,325	9,350	10,031
CA-NV	3,876	3,996	4,133	4,090	3,808	4,345	4,957	5,641	6,936	7,795	8,178
WSCC—U.S.	22,173	23,504	24,770	26,090	27,816	29,236	31,076	33,006	35,993	38,385	39,449

Regional: Installed Generating Capability — Summer — MW

TABLE 20

STEAM — OIL[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	3,964	3,948	4,314	4,314	4,314	4,314	4,314	4,314	4,314	4,314	4,234
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	12,125	12,395	11,683	11,495	11,329	11,324	10,772	10,531	10,416	10,341	10,058
MAIN	4,334	3,755	3,701	3,701	3,732	3,732	3,732	3,732	3,732	3,701	3,651
MAPP—U.S.	518	517	500	500	497	497	497	498	498	498	498
NPCC—U.S.	25,531	24,321	23,422	22,907	21,626	20,466	20,193	19,796	19,122	18,839	18,830
SERC	17,640	17,410	17,076	16,587	16,479	15,709	15,709	15,666	15,640	15,601	15,546
SPP	1,944	1,944	1,683	1,683	2,541	2,541	2,688	2,688	2,688	2,783	2,783
WSCC[g]—U.S.	23,268	23,152	23,152	23,087	22,581	20,910	20,545	20,429	19,959	19,741	19,196
NERC—U.S.	96,924	97,042	95,459	94,202	93,093	79,487	78,450	77,654	76,377	75,819	74,996
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258
WSCC[g]—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	93,182	91,300	89,717	88,460	87,351	83,745	82,708	81,912	80,635	80,076	79,254

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

STEAM — OIL[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwith Ed.	3,248	2,698	2,698	2,698	2,698	2,698	2,698	2,698	2,698	2,698	2,698
Missouri	510	496	496	496	496	496	496	496	496	496	496
So. Cent. Ill.	530	523	469	469	469	469	469	469	469	469	619
WUMS	30	30	30	30	69	69	69	69	69	38	38
MAIN	4,334	3,755	3,701	3,701	3,732	3,732	3,732	3,732	3,732	3,701	3,651
New York	14,987	14,307	13,608	13,406	12,719	11,993	11,716	11,443	10,769	10,486	10,486
New England	10,944	9,814	9,814	9,501	8,902	8,477	8,477	8,353	8,353	8,353	8,344
NPCC—U.S.	25,931	24,321	23,422	22,907	21,626	20,466	20,193	19,796	19,122	18,839	18,830
New Brunswick	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401
Ontario[d]	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232
Québec	625	625	625	625	625	625	625	625	625	625	625
NPCC—Canada	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258
Florida	13,089	14,103	14,037	13,718	13,610	13,103	13,103	13,142	13,124	13,077	13,022
Southern	313	154	154	154	154	154	154	154	154	154	154
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	3,442	3,151	2,985	2,715	2,715	2,378	2,378	2,378	2,378	2,370	2,370
SERC	17,640	17,410	17,076	16,587	16,479	15,709	15,709	15,666	15,640	15,601	15,546
Group A	477	477	536	536	1,474	1,474	1,621	1,621	1,621	1,621	1,621
Group B	50	50	50	50	50	50	50	50	50	50	50
Group C	1,017	1,017	1,017	1,017	1,017	1,017	1,017	1,017	1,017	1,112	1,112
SPP	1,944	1,944	1,683	1,683	2,541	2,541	2,688	2,688	2,688	2,783	2,783
NWPP—U.S.	221	221	221	221	221	221	221	221	221	221	221
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	1,672	1,672	1,672	1,672	1,364	1,487	1,499	1,499	1,291	1,204	1,204
CA-NV	21,375	21,259	21,259	21,194	20,796	19,202	18,915	18,799	18,447	18,316	17,771
WSCC[g]—U.S.	23,268	23,152	23,152	23,087	22,581	20,910	20,545	20,429	19,959	19,741	19,196

Regional: Installed Generating Capability — Summer — MW

TABLE 20

STEAM — GAS[c]	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	143	143	143	29	29	29	29	29	29	29	29
ERCOT	39,994	39,994	31,104	31,134	31,077	31,037	31,037	31,037	30,737	30,737	30,154
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	509	509	509	509	217	217	217	217	217	217	67
MAPP—U.S.	210	213	213	213	213	213	213	213	213	213	213
NPCC—U.S.	26	26	26	26	26	26	26	26	26	26	26
SERC	1,326	1,326	1,326	1,265	1,265	1,223	1,161	1,128	1,128	1,023	893
SPP	27,680	28,021	27,843	27,630	26,545	26,233	25,896	25,731	25,369	25,171	24,875
WSCC[e]-U.S.	2,567	2,567	2,567	2,550	2,550	2,550	2,550	2,550	2,605	2,597	2,560
NERC—U.S.	63,495	63,799	63,731	63,356	61,922	61,528	61,129	60,931	60,264	60,013	58,837
MAPP—Canada	186	186	186	186	186	186	186	186	186	96	96
NPCC—Canada	508	508	508	508	508	508	508	508	508	508	508
WSCC[e]-Canada	1,965	1,965	1,965	1,965	1,965	1,951	1,951	1,951	1,951	1,951	1,859
NERC—Total	66,194	66,938	66,470	66,095	64,661	64,253	63,854	63,636	62,989	62,648	61,300

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

STEAM — GAS[c]	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	26	26	26	26	26	26	26	26	26	26	26
Missouri	35	35	35	35	35	35	35	35	35	35	35
So. Cent. Ill.	150	150	150	150	150	150	150	150	150	150	0
WUMS	298	298	298	298	6	6	6	6	6	6	6
MAIN	509	509	509	509	217	217	217	217	217	217	67
New York	26	26	26	26	26	26	26	26	26	26	26
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	26	26	26	26	26	26	26	26	26	26	26
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[d]	508	508	508	508	508	508	508	508	508	508	508
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	508	508	508	508	508	508	508	508	508	508	508
Florida	180	180	180	173	173	153	153	148	148	148	148
Southern	1,146	1,146	1,146	1,092	1,092	1,069	1,006	980	980	875	745
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	1,326	1,326	1,326	1,265	1,265	1,223	1,161	1,128	1,128	1,023	893
Group A	16,944	17,385	17,257	17,044	15,977	15,745	15,512	15,376	15,082	15,058	14,878
Group B	9,590	9,570	9,520	9,520	9,520	9,460	9,359	9,359	9,249	9,230	9,064
Group C	1,146	1,066	1,066	1,066	1,048	1,028	1,025	996	978	883	733
SPP	27,680	28,021	27,843	27,630	26,545	26,233	25,896	25,731	25,369	25,171	24,875
NWPP—U.S.	66	66	66	66	66	66	66	66	66	66	66
RMPA	391	391	391	364	364	364	364	364	364	356	339
AZ-NM	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,160	1,160	1,160
CA-NV	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015
WSCC[e]-U.S.	2,567	2,567	2,567	2,550	2,550	2,550	2,550	2,550	2,605	2,597	2,560

Regional: Installed Generating Capability — Summer — MW

TABLE 20

COMBUSTION TURBINE — OIL [c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,104	2,169
ERCOT	87	87	87	87	81	81	81	81	81	81	81
MAAC	6,877	6,873	6,878	6,877	6,401	6,401	6,400	6,397	6,397	6,422	6,422
MAIN	1,423	1,576	1,576	1,576	1,654	1,654	1,654	1,644	1,669	1,693	1,869
MAPP—U.S.	3,005	3,006	2,950	3,012	3,003	3,003	3,003	3,022	3,028	3,027	3,079
NPCC—U.S.	4,713	4,724	4,832	4,826	4,750	4,752	4,752	4,751	4,751	4,750	4,752
SERC	10,134	10,140	10,159	10,179	10,132	10,085	10,040	9,995	10,042	10,046	9,968
SPP	1,568	1,568	1,568	1,568	1,566	1,656	1,656	1,852	1,972	1,972	1,972
WSCC*-U.S.	3,682	3,675	3,638	3,620	3,618	3,618	3,668	3,718	3,718	3,768	3,768
NERC—U.S.	33,593	33,753	33,792	33,849	33,309	33,354	33,358	33,564	33,762	33,863	34,080
MAPP—Canada	22	22	22	22	22	22	22	22	22	22	22
NPCC—Canada	832	837	894	923	945	949	954	2,359	3,264	3,670	3,777
WSCC*-Canada	266	266	266	266	266	266	266	266	266	266	266
NERC—Total	34,713	34,878	34,974	35,060	34,542	34,591	34,600	36,211	37,314	37,821	38,145

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

COMBUSTION TURBINE — OIL [c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwith Ed.	609	609	609	609	609	609	609	609	609	609	609
Missouri	352	349	349	349	349	349	349	349	349	349	349
So. Cent. Ill.	111	111	111	111	111	111	111	111	136	160	336
WUMS	351	507	507	507	585	585	585	575	575	575	575
MAIN	1,423	1,576	1,576	1,576	1,654	1,654	1,654	1,644	1,669	1,693	1,869
New York	3,449	3,436	3,436	3,436	3,436	3,436	3,436	3,436	3,436	3,436	3,436
New England	1,264	1,288	1,396	1,390	1,314	1,316	1,316	1,315	1,315	1,314	1,316
NPCC—U.S.	4,713	4,724	4,832	4,826	4,750	4,752	4,752	4,751	4,751	4,750	4,752
New Brunswick	29	29	29	29	29	29	29	29	29	29	29
Ontario	381	383	383	408	426	426	426	426	426	426	426
Quebec	422	425	482	486	490	494	499	1,904	2,809	3,215	3,322
NPCC—Canada	832	837	894	923	945	949	954	2,359	3,264	3,670	3,777
Florida	4,332	4,338	4,357	4,377	4,364	4,364	4,350	4,350	4,337	4,337	4,323
Southern	1,184	1,184	1,184	1,184	1,150	1,103	1,072	1,027	1,087	1,091	1,027
TVA	2,066	2,066	2,066	2,066	2,066	2,066	2,066	2,066	2,066	2,066	2,066
VACAR	2,552	2,552	2,552	2,552	2,552	2,552	2,552	2,552	2,552	2,552	2,552
SERC	10,134	10,140	10,159	10,179	10,132	10,085	10,040	9,995	10,042	10,046	9,968
Group A	315	315	315	315	315	385	385	385	505	505	505
Group B	67	67	67	67	65	65	65	261	261	261	261
Group C	1,186	1,186	1,186	1,186	1,186	1,206	1,206	1,206	1,206	1,206	1,206
SPP	1,568	1,568	1,568	1,568	1,566	1,656	1,656	1,852	1,972	1,972	1,972
NWPP—U.S.	298	301	301	283	283	283	283	333	333	383	383
RMPA	460	460	460	460	460	460	460	460	460	460	460
AZ-NM	1,196	1,200	1,196	1,196	1,194	1,194	1,244	1,244	1,244	1,244	1,244
CA-NV	1,727	1,723	1,690	1,690	1,690	1,690	1,690	1,683	1,690	1,683	1,683
WSCC*-U.S.	3,682	3,675	3,638	3,620	3,618	3,618	3,668	3,718	3,718	3,768	3,768

Regional: Installed Generating Capability — Summer — MW

TABLE 20

COMBUSTION TURBINE — GAS [c,f]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	958	958	964	964	964	964	964	964	964	964	964
ERCOT	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327
MAAC	459	459	459	459	459	459	459	459	459	433	433
MAIN	1,417	1,261	1,261	1,273	1,224	1,224	1,224	1,224	1,224	1,224	1,073
MAPP—U.S.	71	71	71	72	72	72	72	72	72	72	72
NPCC—U.S.	45	48	48	48	48	48	48	48	48	48	48
SERC	202	207	207	207	207	207	207	177	177	177	177
SPP	901	991	1,079	1,070	1,070	1,147	1,147	1,081	1,071	1,071	1,071
WSCC[e]-U.S.	903	1,329	1,329	1,347	1,347	1,347	1,347	1,347	1,347	1,347	1,347
NERC—U.S.	6,283	6,651	6,745	6,767	6,718	6,795	6,795	6,699	6,689	6,663	6,512
MAPP—Canada	115	115	115	115	115	115	115	115	115	115	115
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC[e]-Canada	351	351	351	351	351	351	351	351	292	292	260
NERC—Total	6,749	7,117	7,211	7,233	7,184	7,261	7,261	7,165	7,096	7,070	6,887

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

COMBUSTION TURBINE — GAS [c,f]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	693	693	693	705	710	710	710	710	710	710	710
Missouri	47	47	47	47	47	47	47	47	47	47	47
So. Cent. Ill.	181	181	181	181	181	181	181	181	181	181	30
WUMS	496	340	340	340	286	286	286	286	286	286	286
MAIN	1,417	1,261	1,261	1,273	1,224	1,224	1,224	1,224	1,224	1,224	1,073
New York	45	45	45	45	45	45	45	45	45	45	45
New England	0	3	3	3	3	3	3	3	3	3	3
NPCC—U.S.	45	48	48	48	48	48	48	48	48	48	48
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	89	94	94	94	94	94	94	94	94	94	94
Southern	113	113	113	113	113	113	113	83	83	83	83
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	202	207	207	207	207	207	207	177	177	177	177
Group A	23	113	113	113	113	100	100	100	100	100	100
Group B	268	268	268	269	268	268	268	202	192	192	192
Group C	610	610	698	689	689	779	779	779	779	779	779
SPP	901	991	1,079	1,070	1,070	1,147	1,147	1,081	1,071	1,071	1,071
NWPP—U.S.	123	479	479	497	497	497	497	497	497	497	497
RMPA	127	127	127	127	127	127	127	127	127	127	127
AZ-NM	285	285	285	285	285	285	285	285	285	285	285
CA-NV	368	438	438	438	438	438	438	438	438	438	438
WSCC[e]-U.S.	903	1,329	1,329	1,347	1,347	1,347	1,347	1,347	1,347	1,347	1,347

Regional: Installed Generating Capability — Summer — MW

TABLE 20

COMBINED CYCLE — OIL [c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	392	392	392	392	392	392	392	392	392	392	392
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	452	332	332	332	332	332	332	332	332	332	332
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP — U.S.	173	173	173	173	173	173	173	173	173	173	173
NPCC — U.S.	183	479	479	479	479	479	479	479	479	479	479
SERC	474	474	474	474	474	474	474	474	474	474	474
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC[a] — U.S.	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,160	1,160
NERC — U.S.	2,936	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,010	3,010
MAPP — Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC — Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC — Canada	0	0	0	0	0	0	0	0	0	0	0
NERC — Total	2,936	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,012	3,010	3,010

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

COMBINED CYCLE — OIL [c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York,	0	0	0	0	0	0	0	0	0	0	0
New England	183	479	479	479	479	479	479	479	479	479	479
NPCC — U.S.	183	479	479	479	479	479	479	479	479	479	479
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC — Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	446	446	446	446	446	446	446	446	446	446	446
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	28	28	28	28	28	28	28	28	28	28	28
SERC	474	474	474	474	474	474	474	474	474	474	474
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP — U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	420	420	420	420	420	420	420	420	420	418	418
CA-NV	742	742	742	742	742	742	742	742	742	742	742
WSCC[a] — U.S.	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,162	1,160	1,160

Regional: Installed Generating Capability — Summer — MW

TABLE 20

COMBINED CYCLE — GAS[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	162	162	162	162	162	162	162	162	162	162	162
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	26	26	77	77	77	77	77	77	77	77	77
SPP	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	983	983
WSCC[a]-U.S.	466	466	499	499	499	499	499	499	499	499	499
NERC—U.S.	1,699	1,699	1,783	1,783	1,783	1,783	1,783	1,783	1,783	1,721	1,721
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,699	1,699	1,783	1,783	1,783	1,783	1,783	1,783	1,783	1,721	1,721

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

COMBINED CYCLE — GAS[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	26	26	77	77	77	77	77	77	77	77	77
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	26	26	77	77	77	77	77	77	77	77	77
Group A	203	203	203	203	203	203	203	203	203	203	203
Group B	765	765	765	765	765	765	765	765	765	765	765
Group C	77	77	77	77	77	77	77	77	77	15	15
SPP	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	1,045	983	983
NWPP—U.S.	352	352	352	352	352	352	352	352	352	352	352
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	114	114	114	114	114	114	114	114	114	114	114
CA-NV	0	0	33	33	33	33	33	33	33	33	33
WSCC[a]-U.S.	466	466	499	499	499	499	499	499	499	499	499

Regional: Installed Generating Capability — Summer — MW

TABLE 20

OTHER

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	600	750	1,200	1,950	3,900
MAAC	0	0	0	0	125	175	0	0	0	0	0
MAIN[g]	3	3	3	13	25	38	48	58	69	74	85
MAPP[h]-U.S.	0	15	15	15	15	15	15	15	15	15	15
NPCC—U.S.	17	17	49	109	159	159	159	259	259	259	259
SERC	0	0	0	0	0	0	0	0	100	200	300
SPP	35	35	35	35	35	35	210	210	210	272	262
WSCC—U.S.	1,174	1,223	1,461	1,671	2,034	2,316	2,962	3,094	3,400	3,653	3,912
NERC—U.S.	1,229	1,293	1,563	1,843	2,393	2,738	3,994	4,386	5,253	6,423	8,733
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	33	66	99	132	165	198	231
WSCC[g]-Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,229	1,293	1,563	1,843	2,426	2,804	4,093	4,518	5,418	6,621	8,964

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

OTHER

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	3	3	3	3	3	3	3	3	3	3	3
WUMS[g]	0	0	0	10	22	35	45	55	66	71	82
MAIN	3	3	3	13	25	38	48	58	69	74	85
New York[i]	0	0	32	42	92	92	92	192	192	192	192
New England[i]	17	17	17	67	67	67	67	67	67	67	67
NPCC—U.S.	17	17	49	109	159	159	159	259	259	259	259
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[k]	0	0	0	0	33	66	99	132	165	198	231
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	33	66	99	132	165	198	231
Florida[l]	0	0	0	0	0	0	0	0	100	200	300
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	100	200	300
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	35	35	35	35	35	35	210	210	210	210	200
Group C	0	0	0	0	0	0	0	0	0	62	62
SPP	35	35	35	35	35	35	210	210	210	272	262
NWPP—U.S.	281	299	311	353	368	368	468	468	488	488	513
RMPA	-10	10	10	10	10	10	10	10	10	10	35
AZ-NM	261	261	133	29	363	87	261	261	310	-79	-79
CA-NV[g]	649	1,018	975	1,268	1,520	1,962	3,098	3,338	3,988	4,241	4,438
WSCC[m]-U.S.	1,174	1,223	1,461	1,671	2,034	2,316	2,962	3,094	3,400	3,653	3,912

Regional: Installed Generating Capability — Summer — MW

TABLE 20

TOTAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	89,498	89,919	93,179	97,230	101,474	103,893	107,071	109,945	110,992	112,387	113,622
ERCOT	43,045	43,045	44,093	46,525	46,462	49,532	51,287	52,999	54,099	56,961	59,329
MAAC	45,189	46,438	47,438	47,869	49,492	49,732	50,246	51,677	51,562	51,812	52,431
MAIN	40,795	41,733	42,284	46,560	48,396	49,588	51,468	51,468	51,392	51,965	52,382
MAPP—U.S.	27,371	27,433	29,681	29,327	29,342	30,169	30,963	30,201	31,327	31,442	32,733
NPCC—U.S.	50,584	50,888	51,813	53,639	53,660	55,992	57,638	58,488	58,586	59,065	59,058
SERC	117,293	122,986	126,028	130,915	134,672	137,919	143,398	145,996	150,584	153,328	156,949
SPP	34,215	38,128	42,271	43,317	45,638	47,497	47,995	49,398	71,362	72,678	75,025
WSCC—U.S.	104,392	102,871	110,928	114,864	118,773	121,564	125,761	128,382	131,887	134,733	137,198
NERC—U.S.	572,219	582,445	606,317	629,646	647,909	665,788	684,919	698,258	712,034	724,383	740,488
MAPP—Canada	6,189	6,189	6,460	6,460	6,544	6,712	6,712	6,712	6,992	6,996	6,996
NPCC—Canada	44,166	45,677	47,237	52,002	55,499	56,283	57,085	59,826	63,178	66,394	68,827
WSCC—Canada	15,063	15,063	15,448	17,617	18,360	19,432	19,906	20,691	21,343	22,085	22,241
NERC—Total	637,628	649,365	675,494	705,725	728,301	748,215	768,622	784,887	803,544	819,788	838,552

Subregional: Installed Generating Capability — Summer — MW

TABLE 20S

TOTAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Cmwlth Ed.*	16,276	16,774	16,774	18,954	20,079	21,169	22,259	22,259	22,259	22,259	22,259
Missouri	7,191	7,143	7,143	8,263	8,263	8,263	8,263	8,263	8,293	8,968	8,968
So. Cent. Ill.	8,492	8,595	9,106	10,671	10,671	10,671	10,921	10,921	10,811	10,835	11,210
WUMS	8,926	9,221	9,261	9,272	9,963	9,997	10,017	10,017	10,029	10,083	10,015
MAIN	40,795	41,733	42,284	46,560	48,396	49,588	51,468	51,468	51,392	51,965	52,382
New York	30,928	30,922	30,908	30,943	31,631	31,641	33,305	34,480	34,378	34,290	34,290
New England	20,476	20,766	20,905	22,096	22,029	24,331	24,333	24,208	24,208	24,775	24,768
NPCC—U.S.	50,584	50,888	51,813	53,039	53,660	55,992	57,638	58,488	58,586	59,065	59,058
New Brunswick	2,524	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154
Ontario	23,697	24,194	24,648	26,710	28,615	28,866	29,589	30,503	31,417	32,644	33,916
Québec	17,745	18,419	19,435	22,138	24,319	24,323	24,342	24,169	28,606	30,596	31,757
NPCC—Canada	44,166	45,677	47,237	52,002	55,488	56,283	57,085	59,826	63,178	66,394	68,827
Florida	24,364	25,164	27,233	27,237	28,901	29,498	30,426	30,976	31,620	33,173	33,604
Southern	29,515	30,682	30,324	31,193	31,979	32,682	34,722	34,707	37,321	37,377	37,637
TVA	29,212	29,340	29,340	30,317	31,694	31,694	32,987	34,120	34,120	34,120	36,638
VACAR	34,202	37,800	39,131	41,948	42,098	44,743	45,342	45,793	47,243	48,650	50,070
SERC	117,293	122,986	126,028	130,915	134,672	137,919	143,398	145,996	150,584	153,328	156,949
Group A	22,004	23,958	27,252	27,039	27,697	28,676	29,103	29,767	30,687	31,963	33,095
Group B	18,999	20,476	20,540	20,600	22,321	23,671	23,145	23,278	24,298	24,233	25,260
Group C	13,213	13,706	14,479	15,678	15,660	15,756	15,747	16,348	16,420	16,480	17,478
SPP	34,215	38,128	42,271	43,317	45,638	47,497	47,995	49,398	71,362	72,678	75,025
NWPP—U.S.	43,173	39,960	40,494	42,283	43,357	47,145	48,768	49,164	50,196	51,211	51,271
RMPA	7,538	8,271	8,988	9,431	9,443	9,521	9,958	10,485	11,312	11,344	11,352
AZ-NM	11,831	12,174	12,974	13,868	14,759	15,723	16,631	16,881	16,887	17,424	18,293
CA-NV	41,985	44,981	48,351	49,494	49,385	49,244	51,252	52,701	54,576	56,115	56,369
WSCC* U.S.	104,392	102,871	110,928	114,864	118,773	121,564	125,761	128,382	131,887	134,733	137,198

Regional: Installed Generating Capability — Winter — MW

TABLE 21

NUCLEAR

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	4,691	4,643	7,351	10,283	10,283	12,246	12,636	13,841	14,597	14,597	14,597
ERCOT	0	0	0	2,400	3,350	4,800	4,800	4,800	4,800	4,800	4,800
MAAC	8,387	8,387	9,437	10,487	12,609	12,609	13,664	13,664	13,664	13,664	13,664
MAIN	6,363	7,441	10,589	11,709	13,949	15,069	15,069	15,069	15,099	15,099	15,099
MAPP—U.S.	3,704	3,792	3,792	3,792	3,792	3,792	3,792	3,792	3,792	3,747	3,747
NPCC—U.S.	7,698	8,038	8,847	9,997	9,997	13,387	13,387	13,387	13,387	13,387	13,387
SERC	19,831	21,859	24,002	27,501	29,546	29,546	31,985	34,549	36,356	37,641	38,874
SPP	1,694	1,694	2,788	4,870	5,744	5,744	5,744	6,838	6,838	6,838	6,838
WSCC—U.S.	2,624	4,484	8,140	10,274	10,619	14,092	14,437	14,437	14,437	14,437	15,712
NERC—U.S.	55,272	60,338	74,946	91,313	100,089	111,285	115,514	120,377	122,970	124,218	126,718
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	5,248	5,878	7,031	9,563	10,079	11,579	11,579	12,460	14,222	15,103	15,103
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	60,520	66,216	81,977	100,876	110,168	122,864	127,093	132,837	137,192	139,313	141,821

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

NUCLEAR

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	4,851	5,929	7,007	8,127	10,367	11,487	11,487	11,487	11,487	11,487	11,487
Missouri	0	0	1,120	1,120	1,120	1,120	1,120	1,150	1,150	1,150	1,150
So. Cent. Ill.	0	0	950	950	950	950	950	950	950	950	950
WUMS	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512	1,512
MAIN	6,363	7,441	10,589	11,709	13,949	15,069	15,069	15,069	15,099	15,099	15,099
New York	3,384	3,719	4,528	4,528	4,528	5,618	5,618	5,618	5,618	5,618	5,618
New England	4,314	4,319	4,319	5,469	5,469	7,769	7,769	7,769	7,769	7,769	7,769
NPCC—U.S.	7,698	8,038	8,847	9,997	9,997	13,387	13,387	13,387	13,387	13,387	13,387
New Brunswick	0	630	630	630	630	630	630	630	630	630	630
Ontario	5,248	5,248	5,764	8,296	8,812	10,312	10,312	11,193	12,955	13,836	13,836
Québec	0	0	637	637	637	637	637	637	637	637	637
NPCC—Canada	5,248	5,878	7,031	9,563	10,079	11,579	11,579	12,460	14,222	15,103	15,103
Florida	3,026	3,026	3,864	3,864	3,864	3,864	3,939	4,014	4,014	4,014	4,014
Southern	3,168	3,168	3,293	3,293	3,293	3,293	4,444	5,720	5,720	5,720	5,720
TVA	4,323	5,451	5,451	7,805	7,805	7,805	9,018	10,231	10,231	11,516	12,749
VACAR	9,314	10,214	11,394	12,539	14,584	14,584	14,584	14,584	16,391	16,391	16,391
SERC	19,831	21,859	24,002	27,501	29,546	29,546	31,985	34,549	36,356	37,641	38,874
Group A	1,694	1,694	2,788	3,892	4,766	4,766	4,766	5,860	5,860	5,860	5,860
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	978	978	978	978	978	978	978	978
SPP	1,694	1,694	2,788	4,870	5,744	5,744	5,744	6,838	6,838	6,838	6,838
NWPP—U.S.	1,080	1,080	1,080	2,180	2,180	4,670	4,670	4,670	4,670	4,670	5,945
RMPA	200	200	200	200	200	275	275	275	275	275	275
AZ-NM	0	584	922	1,622	1,844	2,544	2,766	2,766	2,766	2,766	2,766
CA-NV	1,344	2,620	5,938	6,272	6,395	6,603	6,726	6,726	6,726	6,726	6,726
WSCC—U.S.	2,624	4,484	8,140	10,274	10,619	14,092	14,437	14,437	14,437	14,437	15,712

Regional: Installed Generating Capability — Winter — MW

TABLE 21

HYDRO[a]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	585	625	625	625	625	625	625	625	625	625	625
ERCOT	230	230	230	230	230	230	230	230	230	230	230
MAAC	958	958	959	959	959	1,149	1,149	1,149	1,149	1,149	1,149
MAIN	570	570	571	571	572	572	572	573	573	574	574
MAPP—U.S.	2,928	2,756	2,756	2,749	2,783	2,775	2,708	2,767	2,767	2,769	2,769
NPCC—U.S.	5,242	5,267	5,320	5,349	5,384	5,393	5,412	5,455	5,464	5,464	5,464
SERC	9,568	9,481	9,689	9,914	10,180	10,180	10,180	10,247	10,247	10,247	10,247
SPP	2,236	2,362	2,462	2,542	2,542	2,542	2,542	2,542	2,542	2,542	2,542
WSCC—U.S.	43,762[b]	38,993	39,542	39,590	41,536	41,858	42,048	42,477	42,684	42,675	42,762
NERC—U.S.	66,079	61,242	62,154	62,529	64,811	65,324	65,466	66,065	66,281	66,275	66,362
MAPP—Canada	4,193	4,193	4,193	4,193	4,361	4,445	4,445	4,445	4,445	4,445	4,445
NPCC—Canada	24,176	24,712	26,317	28,577	30,165	30,179	30,179	30,200	31,248	33,490	35,821
WSCC—Canada	9,091	9,091	9,991	10,891	10,908	11,028	11,218	11,543	12,191	12,191	12,209
NERC—Total	103,539	99,238	102,655	106,190	110,245	110,976	111,308	112,253	114,165	116,401	118,837

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

HYDRO[a]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	327	327	327	327	327	327	327	327	327	327	327
So. Cent. Ill.	2	2	2	2	2	2	2	2	2	2	2
WUMS	241	241	242	242	243	243	243	244	244	245	245
MAIN	570	570	571	571	572	572	572	573	573	574	574
New York	3,941	3,949	3,980	4,006	4,033	4,039	4,058	4,101	4,110	4,110	4,110
New England	1,301	1,318	1,340	1,343	1,351	1,354	1,354	1,354	1,354	1,354	1,354
NPCC—U.S.	5,242	5,267	5,320	5,349	5,384	5,393	5,412	5,455	5,464	5,464	5,464
New Brunswick	812	812	812	812	812	812	812	812	812	812	812
Ontario	6,449	6,464	6,497	6,518	6,526	6,526	6,526	6,526	6,660	6,970	7,197
Québec	16,915	17,436	19,008	21,247	22,827	22,841	22,841	22,862	23,776	25,708	27,812
NPCC—Canada	24,176	24,712	26,317	28,577	30,165	30,179	30,179	30,200	31,248	33,490	35,821
Florida	36	36	47	47	47	47	47	47	47	47	47
Southern	3,181	3,092	3,249	3,399	3,590	3,590	3,590	3,657	3,657	3,657	3,657
TVA	3,885	3,885	3,885	3,885	3,885	3,885	3,885	3,885	3,885	3,885	3,885
VACAR	2,466	2,468	2,508	2,583	2,658	2,658	2,658	2,658	2,658	2,658	2,658
SERC	9,568	9,481	9,689	9,914	10,180	10,180	10,180	10,247	10,247	10,247	10,247
Group A	69	69	69	69	69	69	69	69	69	69	69
Group B	2,151	2,277	2,377	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457
Group C	16	16	16	16	16	16	16	16	16	16	16
SPP	2,236	2,362	2,462	2,542	2,542	2,542	2,542	2,542	2,542	2,542	2,542
NWPP—U.S.	32,626[b]	28,170	28,151	28,239	30,014	29,994	30,058	30,146	30,262	30,191	30,610
RMPA	2,134	2,088	2,114	2,132	2,135	2,157	2,157	2,157	2,197	2,197	2,197
AZ-NM	603	594	594	594	594	594	594	594	594	594	596
CA-NV	8,399	7,720	8,368	8,558	8,793	9,113	9,239	9,580	9,244	9,298	9,359
WSCC—U.S.	43,762[b]	38,993	39,542	39,590	41,536	41,858	42,048	42,477	42,684	42,675	42,762

Regional: Installed Generating Capability — Winter — MW

TABLE 21

PUMPED STORAGE

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	2,802	2,802	2,802	2,802	3,222	3,642	3,642	3,642	3,642	3,642	3,642
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280
MAIN	225	225	225	225	225	225	225	225	225	225	225
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	2,631	2,631	2,631	2,631	2,631	2,631	3,631	3,631	3,631	3,631	3,631
SERC	2,929	2,910	2,910	2,910	3,435	4,260	5,060	5,060	5,060	5,560	6,060
SPP	260	260	260	260	260	260	260	260	260	260	260
WSCC—U.S.	2,308	2,937	3,275	3,275	3,275	3,275	3,275	3,275	3,275	3,275	3,385
NERC—U.S.	12,435	13,045	13,383	13,383	14,328	15,573	17,373	17,373	17,373	17,873	18,483
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	422	1,477	1,477	1,477	2,110
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	12,435	13,045	13,383	13,383	14,328	15,573	17,795	18,850	18,850	19,350	20,593

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

PUMPED STORAGE

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	225	225	225	225	225	225	225	225	225	225	225
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	225	225	225	225	225	225	225	225	225	225	225
New York	1,000	1,000	1,000	1,000	1,000	1,000	2,000	2,000	2,000	2,000	2,000
New England	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631	1,631
NPCC—U.S.	2,631	2,631	2,631	2,631	2,631	2,631	3,631	3,631	3,631	3,631	3,631
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	422	1,477	1,477	1,477	2,110
NPCC—Canada	0	0	0	0	0	0	422	1,477	1,477	1,477	2,110
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	507	488	488	488	488	638	1,438	1,438	1,438	1,438	1,438
TVA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
VACAR	1,122	1,122	1,122	1,122	1,647	2,322	2,322	2,322	2,322	2,822	3,322
SERC	2,929	2,910	2,910	2,910	3,435	4,260	5,060	5,060	5,060	5,560	6,060
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	260	260	260	260	260	260	260	260	260	260	260
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	260	260	260	260	260	260	260	260	260	260	260
NWPP—U.S.	100	200	300	300	300	300	300	300	300	300	300
RMPA	368	368	468	468	468	468	468	468	468	468	468
AZ-NM	137	137	137	137	137	137	137	137	137	137	287
CA-NV	1,703	2,162	2,330	2,330	2,370	2,370	2,370	2,370	2,330	2,330	2,330
WSCC—U.S.	2,308	2,937	3,275	3,275	3,275	3,275	3,275	3,275	3,275	3,275	3,385

Regional: Installed Generating Capability — Winter — MW

TABLE 21

GEOTHERMAL

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	909	1,124	1,380	1,650	1,816	2,031	2,214	2,609	2,795	3,075	3,185
NERC—U.S.	909	1,124	1,380	1,650	1,816	2,031	2,214	2,609	2,795	3,075	3,185
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	909	1,124	1,380	1,650	1,816	2,031	2,214	2,609	2,795	3,075	3,185

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

GEOTHERMAL

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP—U.S.	0	0	0	20	20	20	20	20	20	20	20
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	50	50	50	100	100	150	150	200	200
CA-NV	909	1,124	1,306	1,531	1,746	1,911	2,094	2,439	2,575	2,805	2,965
WSCC—U.S.[a]	909	1,124	1,380	1,650	1,816	2,031	2,214	2,609	2,795	3,075	3,185

Regional: Installed Generating Capability — Winter — MW

TABLE 21

STEAM — COAL [c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	74,957	77,024	77,355	80,254	81,757	83,758	84,508	85,108	86,899	87,549	88,779
ERCOT	10,245	10,245	11,185	11,185	11,185	12,350	13,612	15,362	17,674	17,674	17,674
MAAC	16,082	16,355	16,792	17,412	17,452	17,637	17,637	18,262	18,088	18,082	19,797
MAIN	26,268	27,271	27,271	27,835	28,223	28,233	29,083	29,083	28,948	29,873	29,741
MAPP—U.S.	16,737	17,608	18,831	18,708	19,208	19,658	19,657	20,820	20,818	20,998	22,494
NPCC—U.S.	4,494	6,602	6,587	8,632	9,477	10,117	10,817	11,303	12,243	12,429	13,279
SERC	57,504	59,148	61,730	63,138	66,207	67,173	68,492	69,416	72,045	73,605	76,270
SPP	17,036	21,303	22,706	23,960	25,606	26,759	26,759	28,189	30,679	33,061	34,871
WSCC—U.S.	22,687	23,708	25,636	26,732	28,278	29,240	31,510	33,935	36,772	38,255	39,351
NERC—U.S.	246,010	259,264	268,093	277,864	287,393	294,925	302,075	311,478	324,166	332,326	342,256
MAPP—Canada	1,679	1,959	1,959	1,959	1,959	1,959	1,959	1,959	2,177	2,333	2,333
NPCC—Canada	9,608	9,821	9,821	10,027	10,027	10,027	10,027	10,027	10,027	10,027	10,027
WSCC—Canada	3,339	3,339	3,716	4,093	4,819	5,985	6,265	6,265	6,765	7,265	7,625
NERC—Total	260,636	274,383	283,589	293,943	304,198	312,816	320,326	329,729	343,135	351,951	362,241

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

STEAM — COAL [c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	7,013	7,013	7,013	7,013	7,013	7,013	7,013	7,013	7,013	7,013	7,013
Missouri	5,565	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	6,218	6,218
So. Cent. Ill.	7,664	8,249	8,249	8,264	8,264	8,264	9,114	9,114	8,979	9,329	9,329
WUMS	6,026	6,366	6,366	6,915	7,303	7,313	7,313	7,313	7,313	7,313	7,181
MAIN	26,268	27,271	27,271	27,835	28,223	28,233	29,083	29,083	28,948	29,873	29,741
New York	3,365	4,398	4,293	5,806	6,156	6,687	7,387	7,873	8,245	8,431	9,281
New England	1,129	2,294	2,294	2,826	3,321	3,430	3,430	3,430	3,998	3,998	3,998
NPCC—U.S.	4,494	6,602	6,587	8,632	9,477	10,117	10,817	11,303	12,243	12,429	13,279
New Brunswick	282	282	282	282	282	282	282	282	282	282	282
Ontario	9,326	9,539	9,539	9,745	9,745	9,745	9,745	9,745	9,745	9,745	9,745
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	9,608	9,821	9,821	10,027	10,027	10,027	10,027	10,027	10,027	10,027	10,027
Florida	2,711	3,878	4,479	4,629	6,689	7,757	8,307	8,907	9,617	10,927	11,327
Southern	19,639	20,606	20,606	21,414	22,068	21,966	22,735	22,609	23,978	24,228	24,773
TVA	16,497	16,497	16,497	16,497	16,497	16,497	16,497	16,497	16,497	16,497	16,497
VACAR	18,657	18,975	20,148	20,598	20,953	20,953	20,953	21,403	21,953	21,953	23,673
SERC	57,504	59,148	61,730	63,138	66,207	67,173	68,492	69,416	72,045	73,605	76,270
Group A	2,124	4,349	4,867	5,614	5,614	6,447	6,447	7,247	8,347	9,859	10,539
Group B	5,824	7,236	7,236	7,751	9,389	9,709	9,709	9,709	10,809	11,509	12,009
Group C	9,088	9,718	10,603	10,603	10,603	10,603	10,603	11,233	11,323	11,693	12,323
SPP	17,036	21,303	22,706	23,960	25,606	26,759	26,759	28,189	30,679	33,061	34,871
NWPP—U.S.	8,461	8,581	9,601	10,126	11,226	11,542	11,857	12,926	13,748	13,756	13,756
RMPA	4,423	4,884	5,486	5,736	5,736	5,736	6,581	7,043	7,488	7,488	7,488
AZ-NM	5,987	6,349	6,434	6,939	7,540	7,617	8,115	8,325	8,600	9,229	9,929
CA-NV	3,876	3,985	4,113	4,215	3,776	4,345	4,957	5,641	6,936	7,795	8,178
WSCC—U.S.[a]	22,687	23,708	25,636	26,732	28,278	29,240	31,510	33,935	36,772	38,255	39,351

Regional: Installed Generating Capability — Winter — MW

TABLE 21

STEAM — OIL[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	3,993	3,891	4,364	4,364	4,364	4,364	4,364	4,364	4,364	4,284	4,284
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	12,416	12,441	11,836	11,487	10,329	10,261	11,833	10,646	10,820	10,276	9,270
MAIN	4,349	3,716	3,716	3,716	3,743	3,743	3,743	3,743	3,716	3,969	3,969
MAPP—U.S.	485	489	489	489	479	479	479	479	479	479	479
NPCC—U.S.	25,491	23,473	23,456	22,824	21,179	20,393	20,243	19,698	19,310	19,018	18,874
SERC	17,612	17,646	16,952	16,682	16,697	15,984	15,859	15,841	15,816	15,733	15,692
SPP	527	527	586	1,674	1,524	1,671	1,671	1,671	1,671	1,766	1,766
WSCC[a]-U.S.	23,268	23,152	23,667	22,533	20,882	20,535	20,517	20,186	19,882	19,296	19,296
NERC—U.S.	98,149	93,339	94,466	92,489	79,566	77,349	77,909	74,629	74,698	74,720	73,931
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258
WSCC[a]-Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	92,398	89,593	88,744	86,746	82,764	81,607	82,167	80,870	80,316	78,978	77,789

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

STEAM — OIL[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	3,277	2,703	2,703	2,703	2,703	2,703	2,703	2,703	2,703	2,703	2,703
Missouri	495	495	495	495	495	495	495	495	495	495	495
So. Cent. Ill.	537	479	479	479	479	479	479	479	479	631	631
WUMS	39	39	39	39	66	66	66	66	39	39	39
MAIN	4,349	3,716	3,716	3,716	3,743	3,743	3,743	3,743	3,716	3,969	3,969
New York	14,615	13,717	13,719	12,819	12,469	11,792	11,772	11,219	10,839	10,956	10,956
New England	10,976	9,756	9,737	9,205	8,710	8,601	8,471	8,471	8,471	8,462	8,320
NPCC—U.S.	25,491	23,473	23,456	22,024	21,179	20,393	20,243	19,698	19,310	19,018	18,874
New Brunswick	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481	1,481
Ontario[d]	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232
Québec	625	625	625	625	625	625	625	625	625	625	625
NPCC—Canada	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258	4,258
Florida	14,095	14,297	14,054	13,904	13,464	13,361	13,316	13,298	13,273	13,199	13,199
Southern	154	154	154	154	154	154	154	154	154	154	113
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	3,363	3,195	2,744	2,744	2,389	2,389	2,389	2,389	2,389	2,389	2,389
SERC	17,612	17,646	16,952	16,682	16,697	15,984	15,859	15,841	15,816	15,732	15,692
Group A	477	477	536	1,024	1,474	1,621	1,621	1,621	1,621	1,621	1,621
Group B	50	50	50	50	50	50	50	50	50	50	50
Group C	0	0	0	0	0	0	0	0	0	95	95
SPP	527	527	586	1,674	1,524	1,671	1,671	1,671	1,671	1,766	1,766
NWPP—U.S.	221	221	221	221	221	221	221	221	221	221	221
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	1,673	1,673	1,673	1,517	1,469	1,329	1,410	1,347	1,368	1,368	1,368
CA-NV	21,374	21,256	21,220	21,192	19,281	18,986	18,886	18,618	18,446	18,315	17,776
WSCC[a]-U.S.	23,268	23,152	23,667	22,533	20,882	20,535	20,517	20,186	19,882	19,296	19,296

Regional: Installed Generating Capability — Winter — MW

TABLE 21

STEAM — GAS[c]	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	143	143	29	29	29	29	29	29	29	29	29
ERCOT	30,994	30,994	31,134	31,094	31,037	31,037	31,037	30,852	30,737	30,154	29,734
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	523	523	523	262	240	240	240	240	240	88	88
MAPP—U.S.	199	202	202	202	202	202	202	202	202	202	202
NPCC—U.S.	29	29	29	29	29	29	29	29	29	29	29
SERC	1,333	1,333	1,272	1,272	1,239	1,166	1,132	1,132	1,027	897	850
SPP	28,901	28,901	29,692	27,986	27,277	27,001	26,767	26,363	26,345	25,916	25,676
WSCC[e]-U.S.	2,482	2,482	2,465	2,465	2,465	2,465	2,465	2,465	2,465	2,403	2,395
NERC—U.S.	64,604	64,607	65,346	63,339	62,518	62,169	61,901	61,312	61,074	59,718	59,003
MAPP—Canada	196	196	196	196	196	196	196	196	96	96	96
NPCC—Canada	588	588	588	588	588	588	588	588	588	588	588
WSCC[e]-Canada	1,965	1,965	1,965	1,965	1,951	1,951	1,951	1,951	1,951	1,859	1,859
NERC—Total	67,343	67,346	68,085	66,078	65,243	64,894	64,626	64,037	63,709	62,261	61,546

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

STEAM — GAS[c]	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	5	5	5	5	5	5	5
Missouri	35	35	35	35	35	35	35	35	35	35	35
So. Cent. Ill.	152	152	152	152	152	152	152	152	152	0	0
WUMS	336	336	336	75	48	48	48	48	48	48	48
MAIN	523	523	523	262	240	240	240	240	240	88	88
New York	29	29	29	29	29	29	29	29	29	29	29
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	29	29	29	29	29	29	29	29	29	29	29
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[d]	588	588	588	588	588	588	588	588	588	588	588
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	588	588	588	588	588	588	588	588	588	588	588
Florida	187	187	180	180	172	160	152	152	152	152	152
Southern	1,146	1,146	1,092	1,092	1,067	1,006	980	980	875	745	698
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	1,333	1,333	1,272	1,272	1,239	1,166	1,132	1,132	1,027	897	850
Group A	17,229	17,229	18,070	16,364	15,753	15,535	15,376	15,082	15,082	14,933	14,878
Group B	9,586	9,586	9,536	9,536	9,476	9,418	9,375	9,265	9,265	9,080	8,895
Group C	2,086	2,086	2,086	2,086	2,048	2,048	2,016	2,016	1,998	1,903	1,903
SPP	28,901	28,901	29,692	27,986	27,277	27,001	26,767	26,363	26,345	25,916	25,676
NWPP—U.S.	66	66	66	66	66	66	66	66	66	66	66
RMPA	295	295	270	270	270	270	270	270	270	261	253
AZ-NM	1,106	1,106	1,106	1,106	1,106	1,106	1,106	1,106	1,061	1,061	1,061
CA-NV	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015	1,015
WSCC[e]-U.S.	2,482	2,482	2,465	2,465	2,465	2,465	2,465	2,465	2,465	2,403	2,395

Regional: Installed Generating Capability — Winter — MW

TABLE 21

COMBUSTION TURBINE — OIL [c/]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	2,506	2,506	2,506	2,506	2,506	2,506	2,506	2,506	2,506	2,506	2,571
ERCOT	87	87	87	81	81	81	81	81	81	81	81
MAAC	8,770	8,777	8,777	8,777	8,137	8,137	8,133	8,133	8,165	8,164	8,164
MAIN	1,719	1,901	1,901	1,901	1,993	1,993	1,993	1,983	2,010	2,212	2,174
MAPP—U.S.	3,604	3,728	3,726	3,805	3,796	3,796	3,793	3,802	3,831	3,832	3,690
NPCC—U.S.	5,958	6,096	6,090	5,993	5,995	5,995	5,994	5,994	5,993	5,995	5,995
SERC	11,510	11,527	11,559	11,508	11,456	11,404	11,355	11,340	11,371	11,281	11,103
SPP	1,783	1,783	1,783	1,783	1,781	1,851	1,851	2,047	2,167	2,167	2,217
WSCC[e]-U.S.	3,891	3,878	3,845	3,843	3,843	3,843	3,943	3,943	3,993	3,993	3,992
NERC—U.S.	39,628	40,283	40,274	40,197	39,588	39,606	39,649	39,829	40,117	40,231	40,187
MAPP—Canada	26	26	26	26	26	26	26	26	30	26	30
NPCC—Canada	884	979	1,017	1,024	1,057	1,065	2,474	3,383	3,793	3,904	3,916
WSCC[e]-Canada	266	266	266	266	266	266	266	266	266	266	266
NERC—Total	41,004	41,554	41,583	41,513	40,937	40,963	42,415	43,504	44,206	44,427	44,399

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

COMBUSTION TURBINE — OIL [c/]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	790	790	790	790	790	790	790	790	790	790	790
Missouri	418	418	418	418	418	418	418	418	418	418	418
So. Cent. Ill.	121	121	121	121	121	121	121	121	148	350	377
WUMS	390	572	572	572	664	664	664	654	654	654	589
MAIN	1,719	1,901	1,901	1,901	1,993	1,993	1,993	1,983	2,010	2,212	2,174
New York	4,370	4,370	4,370	4,370	4,370	4,370	4,370	4,370	4,370	4,370	4,370
New England	1,588	1,726	1,720	1,623	1,625	1,625	1,624	1,624	1,623	1,625	1,625
NPCC—U.S.	5,958	6,096	6,090	5,993	5,995	5,995	5,994	5,994	5,993	5,995	5,995
New Brunswick	29	29	29	29	29	29	29	29	29	29	29
Ontario	389	448	480	480	505	505	505	505	505	505	505
Québec	466	502	508	515	523	531	1,940	2,849	3,259	3,370	3,382
NPCC—Canada	884	979	1,017	1,024	1,057	1,065	2,474	3,383	3,793	3,904	3,916
Florida	5,044	5,061	5,093	5,080	5,080	5,063	5,063	5,048	5,048	5,033	5,033
Southern	1,313	1,313	1,313	1,275	1,223	1,180	1,139	1,139	1,170	1,095	917
TVA	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432	2,432
VACAR	2,721	2,721	2,721	2,721	2,721	2,721	2,721	2,721	2,721	2,721	2,721
SERC	11,510	11,527	11,559	11,508	11,456	11,404	11,355	11,340	11,371	11,281	11,103
Group A	315	315	315	315	315	385	385	385	505	505	505
Group B	67	67	67	67	65	65	65	261	261	261	261
Group C	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,401	1,451
SPP	1,783	1,783	1,783	1,783	1,781	1,851	1,851	2,047	2,167	2,167	2,217
NWPP—U.S.	313	314	314	314	314	314	364	364	414	414	413
RMPA	551	551	551	551	551	551	551	551	551	551	551
AZ-NM	1,207	1,207	1,207	1,205	1,205	1,205	1,255	1,255	1,255	1,255	1,255
CA-NV	1,620	1,806	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773	1,773
WSCC[e]-U.S.	3,891	3,878	3,845	3,843	3,843	3,843	3,943	3,943	3,993	3,993	3,992

Regional: Installed Generating Capability — Winter — MW

TABLE 21

COMBUSTION TURBINE — GAS[c,f]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	1,196	1,202	1,202	1,202	1,202	1,202	1,202	1,202	1,202	1,202	1,202
ERCOT	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327
MAAC	485	485	485	485	485	485	485	485	453	453	453
MAIN	1,741	1,559	1,571	1,571	1,506	1,506	1,506	1,506	1,506	1,328	1,328
MAPP—U.S.	94	94	95	95	95	95	95	95	95	95	95
NPCC—U.S.	54	57	57	57	57	57	57	57	57	57	57
SERC	215	219	219	219	219	219	183	183	183	183	183
SPP	844	1,013	1,092	1,092	1,092	1,169	1,169	1,103	1,093	1,093	1,093
WSCC[e]-U.S.	1,304	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384
NERC—U.S.	7,260	7,340	7,432	7,432	7,367	7,444	7,408	7,342	7,300	7,122	7,122
MAPP—Canada	115	115	115	115	115	127	127	127	127	127	127
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC[e]-Canada	351	351	351	351	351	351	351	348	292	260	260
NERC—Total	7,726	7,806	7,898	7,898	7,833	7,922	7,886	7,817	7,719	7,509	7,509

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

COMBUSTION TURBINE — GAS[c,f]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	869	869	881	881	881	881	881	881	881	881	881
Missouri	57	57	57	57	57	57	57	57	57	57	57
So. Cent. Ill.	210	210	210	210	210	210	210	210	210	32	32
WUMS	605	423	423	423	358	358	358	358	358	358	358
MAIN	1,741	1,559	1,571	1,571	1,506	1,506	1,506	1,506	1,506	1,328	1,328
New York	54	54	54	54	54	54	54	54	54	54	54
New England	0	3	3	3	3	3	3	3	3	3	3
NPCC—U.S.	54	57	57	57	57	57	57	57	57	57	57
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	92	96	96	96	96	96	96	96	96	96	96
Southern	123	123	123	123	123	123	87	87	87	87	87
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	215	219	219	219	219	219	183	183	183	183	183
Group A	23	113	113	113	113	100	100	100	100	100	100
Group B	268	268	268	268	268	268	268	202	192	192	192
Group C	553	632	711	711	711	801	801	801	801	801	801
SPP	844	1,013	1,092	1,092	1,092	1,169	1,169	1,103	1,093	1,093	1,093
NWPP—U.S.	489	489	489	489	489	489	489	489	489	489	489
RMPA	156	156	156	156	156	156	156	156	156	156	156
AZ-NM	291	291	291	291	291	291	291	291	291	291	291
CA-NV	368	448	448	448	448	448	448	448	448	448	448
WSCC[e]-U.S.	1,304	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384

Regional: Installed Generating Capability — Winter — MW

TABLE 21

COMBINED CYCLE — OIL[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	455	455	455	455	455	455	455	455	455	455	455
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	386	386	386	386	386	386	386	386	386	386	386
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	205	205	205	205	205	205	205	205	205	205	205
NPCC—U.S.	559	559	559	559	559	559	559	559	559	559	559
SERC	546	546	546	546	546	546	546	546	546	546	546
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC[e]-U.S.	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,217	1,217	1,217
NERC—U.S.	3,370	3,370	3,370	3,370	3,370	3,370	3,370	3,370	3,368	3,368	3,368
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	3,370	3,370	3,370	3,370	3,370	3,370	3,370	3,370	3,368	3,368	3,368

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

COMBINED CYCLE — OIL[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
New England	559	559	559	559	559	559	559	559	559	559	559
NPCC—U.S.	559	559	559	559	559	559	559	559	559	559	559
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	518	518	518	518	518	518	518	518	518	518	518
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	28	28	28	28	28	28	28	28	28	28	28
SERC	546	546	546	546	546	546	546	546	546	546	546
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	432	432	432	432	432	432	432	432	430	430	430
CA-NV	787	787	787	787	787	787	787	787	787	787	787
WSCC[e]-U.S.	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,219	1,217	1,217	1,217

Regional: Installed Generating Capability — Winter — MW

TABLE 21

COMBINED CYCLE — GAS[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	162	162	162	162	162	162	162	162	162	162	162
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	31	88	88	88	88	88	88	88	88	88	88
SPP	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,843	1,843
WSCC[e]-U.S.	514	514	547	547	547	547	547	547	547	547	547
NERC—U.S.	1,812	1,869	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,840	1,840
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,812	1,869	1,902	1,902	1,902	1,902	1,902	1,902	1,902	1,840	1,840

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

COMBINED CYCLE — GAS[c]

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	0	0	0	0	0	0	0	0	0	0
WUMS	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	31	88	88	88	88	88	88	88	88	88	88
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	31	88	88	88	88	88	88	88	88	88	88
Group A	203	203	203	203	203	203	203	203	203	203	203
Group B	825	825	825	825	825	825	825	825	825	825	825
Group C	77	77	77	77	77	77	77	77	77	15	15
SPP	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,105	1,043	1,043
NWPP—U.S.	400	400	400	400	400	400	400	400	400	400	400
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	114	114	114	114	114	114	114	114	114	114	114
CA-NV	0	0	33	33	33	33	33	33	33	33	33
WSCC[e]-U.S.	514	514	547	547	547	547	547	547	547	547	547

Regional: Installed Generating Capability — Winter — MW

TABLE 21

OTHER

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	600	750	1,950	2,600	3,900
MAAC	0	0	0	0	125	175	0	0	0	0	0
MAIN[g]	3	3	13	25	38	48	58	69	74	85	90
MAPP[h]-U.S.	0	15	15	15	15	15	15	15	15	15	15
NPCC—U.S.	17	49	49	109	159	159	159	259	259	259	259
SERC	0	0	0	0	0	0	0	100	200	300	300
SPP	35	35	35	35	35	210	210	210	210	272	262
WSCC[g]-U.S.	1,037	1,427	1,566	1,851	2,157	2,649	3,005	3,234	3,434	3,692	3,824
NERC—U.S.	1,092	1,529	1,678	2,035	2,529	3,256	4,047	4,637	6,142	7,223	8,650
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	33	66	99	132	165	198	231	264
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,092	1,529	1,678	2,068	2,595	3,355	4,179	4,802	6,340	7,454	8,914

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

OTHER

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed.	0	0	0	0	0	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0	0	0	0
So. Cent. Ill.	3	3	3	3	3	3	3	3	3	3	3
WUMS[g]	0	0	10	22	35	45	55	66	71	82	87
MAIN	3	3	13	25	38	48	58	69	74	85	90
New York[i]	0	32	32	42	92	92	92	192	192	192	192
New England[i]	17	17	17	67	67	67	67	67	67	67	67
NPCC—U.S.	17	49	49	109	159	159	159	259	259	259	259
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[k]	0	0	0	33	66	99	132	165	198	231	264
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	33	66	99	132	165	198	231	264
Florida[l]	0	0	0	0	0	0	0	100	200	300	300
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	100	200	300	300
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	35	35	35	35	35	210	210	210	210	210	200
Group C	0	0	0	0	0	0	0	0	0	62	62
SPP	35	35	35	35	35	210	210	210	210	272	262
NWPP—U.S.	144	298	343	343	358	358	458	458	478	478	376
RMPA	-10	10	10	10	10	10	10	10	10	35	35
AZ-NM	261	368	30	29	363	203	261	261	310	-79	-79
CA-NV[g]	642	755	997	1,317	1,536	2,120	2,466	3,003	3,352	3,605	3,828
WSCC[m]-U.S.	1,037	1,427	1,566	1,851	2,157	2,649	3,005	3,234	3,434	3,692	3,824

Regional: Installed Generating Capability — Winter — MW

TABLE 21

TOTAL

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
ECAR	91,328	93,291	96,689	102,520	104,443	108,827	109,967	111,772	114,319	114,089	116,184
ERCOT	43,845	43,845	44,125	46,479	47,372	49,987	51,849	53,864	56,961	57,928	57,988
MAAC	48,764	49,069	49,932	51,273	51,762	52,119	53,767	54,005	54,005	54,254	54,163
MAIN	41,760	43,209	46,360	47,815	50,489	51,629	52,489	52,491	52,391	53,352	53,187
MAPP—U.S.	28,036	28,889	30,111	30,859	30,574	31,016	30,946	32,177	32,284	32,342	33,894
NPCC—U.S.	52,373	52,801	53,625	55,380	55,467	58,720	60,288	60,364	60,932	60,828	61,536
SERC	121,879	124,737	129,967	133,898	138,923	140,486	144,880	148,502	152,939	156,881	160,213
SPP	54,421	58,983	62,569	64,715	64,964	68,312	68,078	70,329	72,916	74,958	76,568
WSCC—U.S.	106,005	105,302	112,986	115,363	118,621	123,138	126,564	129,711	132,885	134,249	137,958
NERC—U.S.	586,611	599,346	624,444	647,502	664,217	684,234	698,828	712,914	729,946	737,981	750,765
MAPP—Canada	6,199	6,479	6,479	6,479	6,647	6,743	6,743	6,743	6,875	7,027	7,031
NPCC—Canada	44,762	44,236	43,032	54,070	56,240	57,795	59,459	62,558	65,811	69,078	72,087
WSCC—Canada	15,012	15,012	16,289	17,566	18,295	19,501	20,051	20,373	21,465	21,841	22,219
NERC—Total	652,784	667,073	696,244	725,617	745,399	768,273	785,281	802,588	823,697	835,927	852,642

Subregional: Installed Generating Capability — Winter — MW

TABLE 21S

TOTAL

	ACTUAL 1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
Cmwlth Ed. [5]	16,000	17,304	18,394	19,514	21,739	22,879	22,879	22,879	22,879	22,879	22,879
Missouri	7,122	7,200	8,320	8,320	8,320	8,320	8,320	8,350	8,350	8,925	8,925
So. Cent. Ill.	9,689	9,216	10,166	10,181	10,181	10,181	11,831	11,831	10,923	11,297	11,324
WUMS	9,149	9,489	9,580	9,800	10,229	10,249	10,289	10,261	10,229	10,251	10,959
MAIN	41,760	43,209	46,360	47,815	50,489	51,629	52,489	52,491	52,391	53,352	53,187
New York	30,998	31,178	32,005	32,654	32,731	33,681	35,380	33,436	35,457	35,369	36,210
New England	21,415	21,623	21,620	22,726	22,736	25,039	24,908	25,475	25,468	25,326	25,326
NPCC—U.S.	52,373	52,801	53,625	55,380	55,467	58,720	60,288	60,364	60,932	60,828	61,536
New Brunswick	2,924	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154	3,154
Ontario	24,232	24,519	25,188	27,892	28,474	30,807	30,940	30,954	32,883	34,115	34,367
Quebec	18,206	18,563	20,778	23,024	24,612	24,634	26,465	28,450	29,774	31,809	34,566
NPCC—Canada	44,762	46,236	49,032	54,070	56,240	57,795	59,459	62,558	65,811	69,078	72,087
Florida	25,740	26,379	28,419	28,406	30,018	30,954	31,526	32,268	33,053	34,365	34,765
Southern	29,231	30,090	30,318	31,230	32,006	31,958	34,567	35,784	37,079	37,184	37,403
TVA	28,437	29,565	29,565	31,919	31,919	31,919	33,132	34,345	34,345	35,638	36,863
VACAR	37,671	38,723	40,665	42,339	44,986	45,655	45,655	46,105	46,462	46,962	51,182
SERC	121,879	124,797	129,967	133,898	138,923	140,486	144,880	148,502	152,939	156,881	160,213
Group A	22,134	24,449	26,961	27,994	29,307	29,126	28,967	30,567	31,987	33,150	33,779
Group B	19,066	20,694	20,634	21,249	22,825	23,262	23,219	23,239	24,329	24,844	25,149
Group C	13,221	13,930	14,894	15,972	15,634	15,924	15,892	16,522	16,594	16,964	17,444
SPP	54,421	58,983	62,569	64,715	64,966	68,312	68,078	70,329	72,910	74,958	76,568
NWPP—U.S.	43,849	39,739	40,965	42,699	45,588	48,374	48,903	50,068	51,068	51,885	52,396
RMPA	8,117	8,552	9,263	9,531	9,534	9,631	10,476	10,938	11,423	11,431	11,423
AZ-NM	11,811	12,855	12,998	14,836	15,136	15,671	16,581	16,779	17,813	17,303	18,155
CA-NV	42,237	43,696	48,346	49,472	47,875	49,564	50,794	52,513	53,665	54,938	55,212
WSCC[6]-U.S.	106,005	105,302	112,986	115,363	118,621	123,138	126,564	129,711	132,885	134,249	137,958

Footnotes

a/ Adverse hydro is assumed for forecast years.

b/ Data for actual year can be greater than for forecast years if median hydro occurred. Adverse hydro is assumed for forecast years.

c/ Fuel type: fuel expected to be burned more than 50% of the time.

d/ Includes mothballed units (1,116 MW & 588 MW).

e/ A significant number of WSCC units have the dual capability of burning oil or gas. The amount of oil-fired or gas-fired generation will depend on factors such as gas availability and fuel economics. WSCC's oil/gas data was disaggregated at the request of NERC staff to accommodate their purposes. WSCC cautions against drawing any conclusions from this data which it is felt should more appropriately be considered together.

f/ Includes diesel.

g/ Includes cogeneration and wind generation.

h/ 15 MW steam unit burning wood as primary fuel.

i/ Refuse-fueled.

j/ Wood.

k/ Cogeneration.

l/ Peat.

m/ Includes a significant amount of waste-heat.

n/ Excludes CECO's Dresden 1 (197 MW).

o/ Since the subregional peak demands may occur in different months than the coincident total WSCC (U.S.) peak demand, the sum of the individual subregional generating capabilities based on those peak demands may not equal the WSCC (U.S.) total.

Net Electrical Energy Generation

by Principal Energy Source

The *Net Electrical Energy Generation* data include the total annual energy projected to be generated in the contiguous U.S., categorized by principal fuel sources. Also included is a tabulation of scheduled energy imports and exports to provide a tabulated total net energy available for load.

The Electric Generation data assumes that the plans for the Installed Generating Capability, as tabulated for the various NERC Regions in Tables 20 & 21, will be realized on schedule.

Utilities are forecasting a growth of net electrical energy requirements for 1982-1991 which, in the aggregate for the U.S., results in an average annual growth rate of 3.3%. Last year's projected average annual growth rate for 1981-1990 was 3.7%.

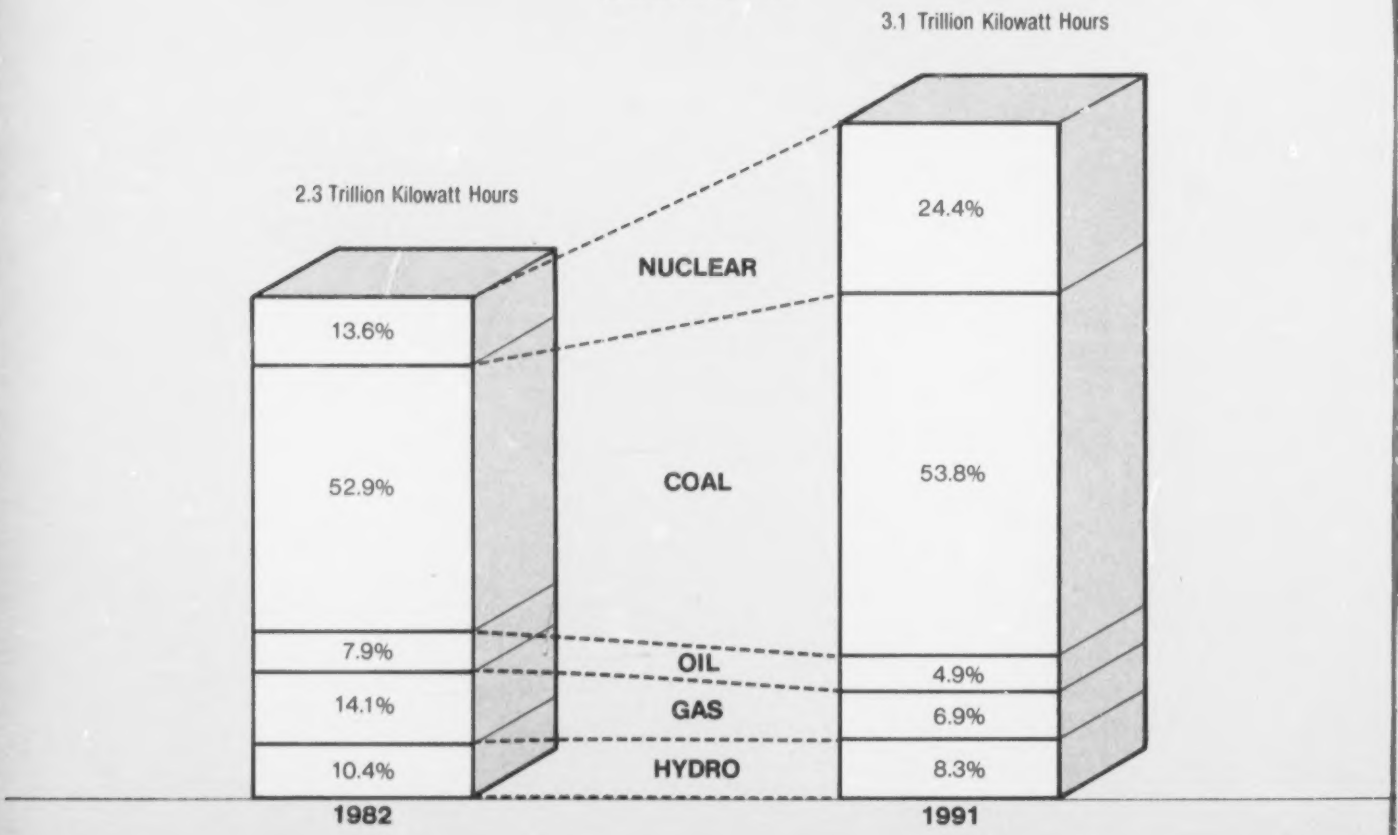
Even though the NERC Regions are projecting a substantially lower growth rate than in past years, based on this year's projections they will require 33% more electric energy ten years from now. The figure below shows, by principal energy sources, the growth of net generation required to provide this energy by 1991.

The projected changes in the relative contributions of the principal energy sources to total net generation in the U.S. are as follows: *Gas* dropping from 14.1% in 1982 to 6.9% in 1991; *Oil* decreasing from 7.9% in 1982 to 4.9% in 1991; *Nuclear* jumping from 13.6% in 1982 to 24.4% in 1991; *Coal* rising from 52.9% in 1982 to 53.8% in 1991; and *Hydro* declining from 10.4% in 1982 to 8.3% in 1991.

Net Change in Generation (U.S.) 1982-1991	
Nuclear	139.6%
Coal	35.9%
Hydro	7.3%
Oil	−17.6%
Gas	−34.8%

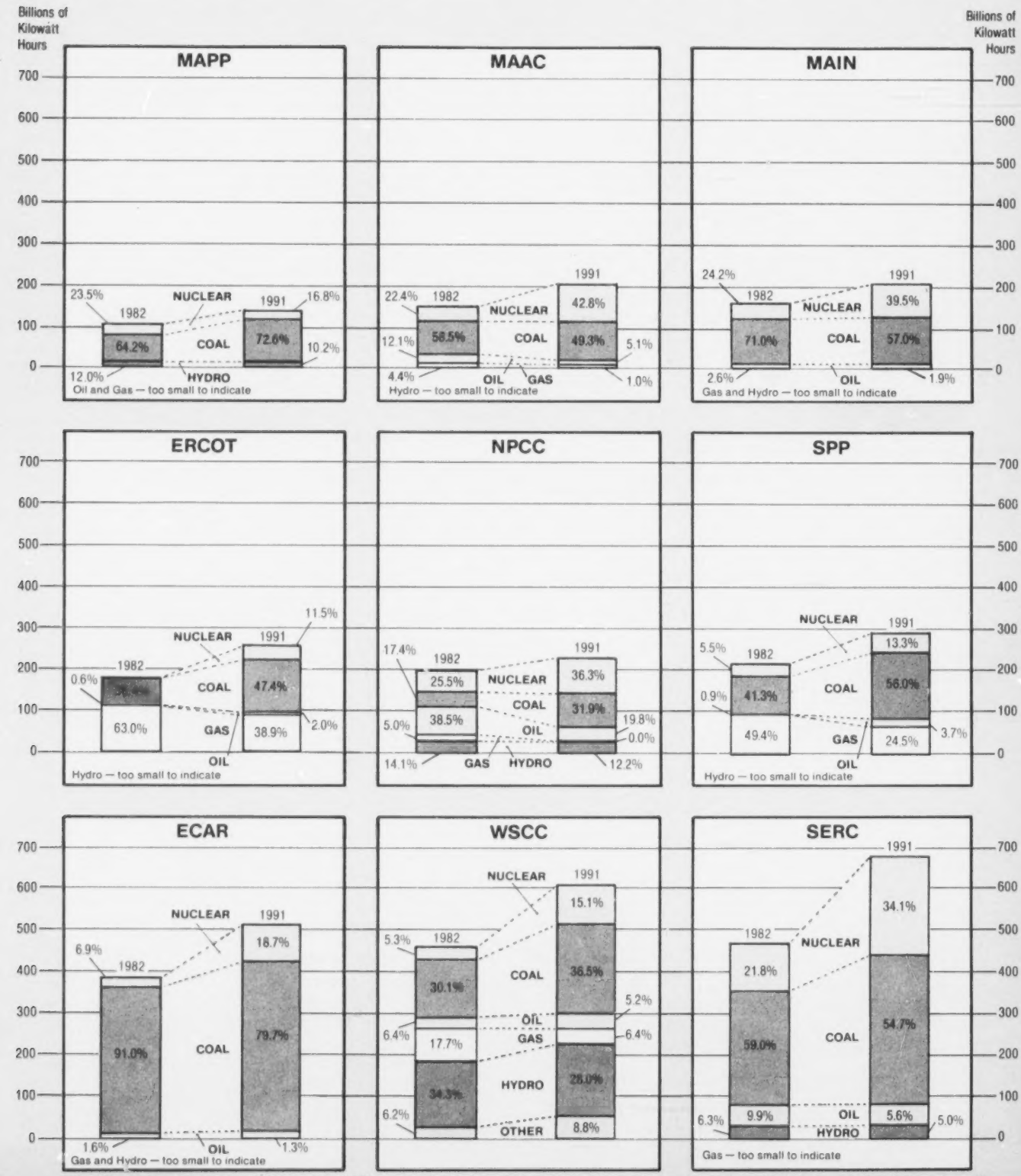
NERC Electric Generation by Principal Energy Sources*

(Contiguous U.S.)



Regional Electric Generation by Principal Energy Sources*

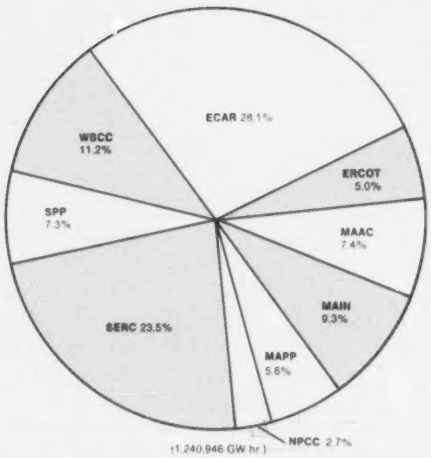
(Contiguous U.S.)

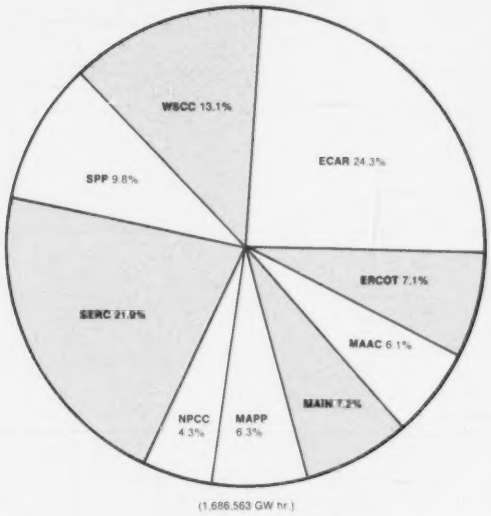


*The difference between the sum of the parts and 100% represents the share of electric generation by sources not shown, including net pumped storage requirements.

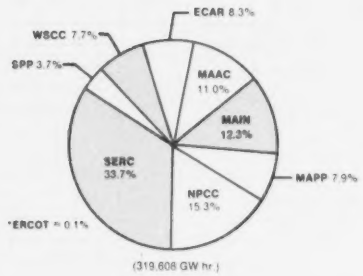
Electric Generation by Principal Energy Sources by NERC (U.S.) Region

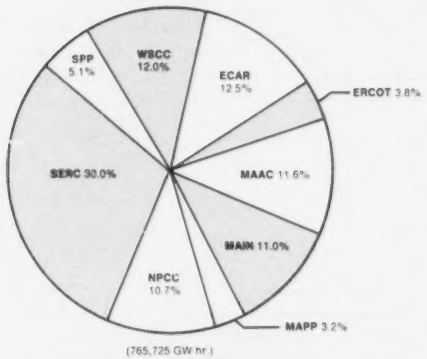
COAL



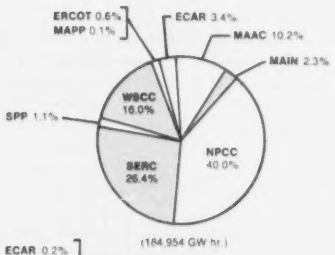


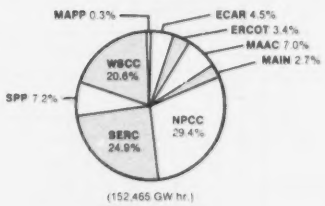
NUCLEAR



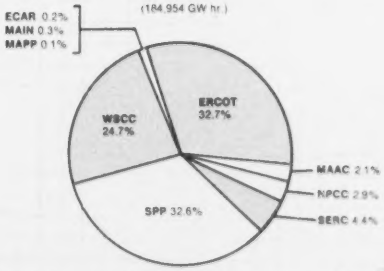


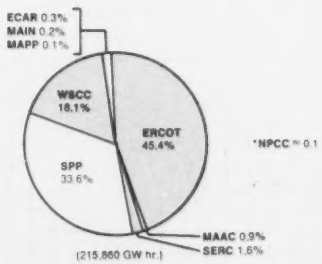
OIL



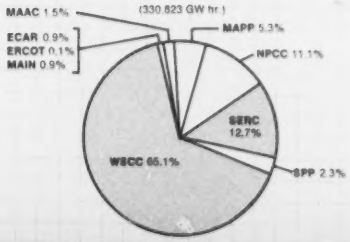


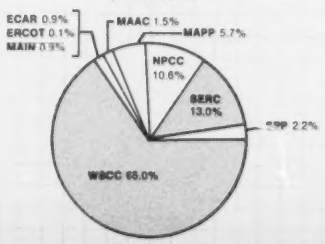
GAS





HYDRO





*Too small to indicate

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

NUCLEAR	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	26,460	26,491	28,965	49,983	51,111	64,645	75,316	83,104	88,340	94,403	95,976
ERCOT	0	0	0	3,310	9,229	15,758	21,528	23,344	27,456	29,055	29,110
MAAC	32,847	35,161	51,808	56,318	62,816	67,835	78,453	86,264	86,651	89,723	89,036
MAIN	37,192	39,411	47,275	64,269	71,343	77,827	79,753	84,217	81,875	81,287	83,990
MAPP—U.S.	21,030	25,275	25,795	25,156	25,398	25,427	24,293	24,777	25,796	24,634	24,461
NPCC—U.S.	43,246	48,928	54,950	57,990	59,690	67,530	79,397	80,273	80,875	82,201	82,201
SERC	91,385	107,707	131,662	153,709	164,476	174,127	182,205	198,501	206,368	216,676	230,013
SPP	9,188	11,978	19,391	24,596	27,145	30,013	32,402	36,070	38,552	40,027	39,310
WSCC—U.S.	12,637	24,657	39,655	56,439	61,690	71,936	85,521	86,782	88,674	88,786	91,628
NERC—U.S.	273,985	319,608	399,501	493,770	542,898	595,098	658,868	703,332	724,587	746,792	765,725
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	37,799	37,713	43,115	60,488	62,140	73,615	74,945	83,685	89,415	98,836	104,432
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	311,784	357,321	442,616	554,258	605,038	668,713	733,813	787,017	814,002	845,628	870,157

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

NUCLEAR	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	17,441	20,190	26,120	26,840	26,840	27,860	32,960	32,960	32,960	32,960	32,960
New England	25,805	28,738	28,830	31,150	32,850	39,670	46,437	47,313	47,915	49,241	49,241
NPCC—U.S.	43,246	48,928	54,950	57,990	59,690	67,530	79,397	80,273	80,875	82,201	82,201
New Brunswick	0	1,561	1,715	1,829	1,943	1,943	1,943	1,943	1,943	2,443	4,266
Ontario	37,799	36,152	40,323	54,750	56,288	67,763	69,093	77,833	83,563	92,484	96,257
Quebec	0	0	1,077	3,909	3,909	3,909	3,909	3,909	3,909	3,909	3,909
NPCC—Canada	37,799	37,713	43,115	60,488	62,140	73,615	74,945	83,685	89,415	98,836	104,432
Florida	14,328	18,345	20,329	24,017	25,983	24,527	23,899	26,219	24,067	24,043	26,184
Southern	12,789	16,388	20,138	20,270	20,144	20,101	23,198	27,067	30,341	30,394	30,402
TVA	22,876	23,748	27,086	37,696	42,872	44,991	51,317	57,887	58,629	64,658	73,229
VACAR	41,392	49,226	64,109	71,326	75,477	84,588	83,591	88,128	93,331	97,581	100,198
SERC	91,385	107,707	131,662	153,709	164,476	174,127	182,205	198,501	206,368	216,676	230,013
Group A	9,188	11,978	19,391	21,380	22,298	24,714	26,270	29,926	32,419	33,893	33,176
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	3,216	4,847	5,299	6,132	6,144	6,133	6,134	6,134
SPP	9,188	11,978	19,391	24,596	27,145	30,013	32,402	36,070	38,552	40,027	39,310
NWPP—U.S.	8,473	11,200	8,677	12,535	14,892	18,195	28,347	28,223	28,663	28,680	32,062
RMPA	755	827	873	1,054	1,051	1,348	1,445	1,449	1,445	1,445	1,445
AZ-NM	0	0	2,641	7,643	10,659	14,611	16,983	17,956	19,493	19,618	19,679
CA-NV	3,409	12,630	27,464	35,207	35,086	37,782	38,746	39,154	39,073	39,043	38,442
WSCC—U.S.	12,637	24,657	39,655	56,439	61,690	71,936	85,521	86,782	88,674	88,786	91,628

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

HYDRO[a]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	2,137	2,259	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416	2,416
ERCOT	501	303	303	303	303	303	303	303	303	303	303
MAAC	3,040	3,585	3,587	3,589	3,625	3,708	3,822	3,821	3,822	3,822	3,822
MAIN	2,322	2,250	2,250	2,258	2,264	2,264	2,264	2,264	2,264	2,264	2,270
MAPP—U.S.	12,907	12,885	13,389	13,795	14,044	14,307	14,303	14,424	14,548	14,673	14,804
NPCC—U.S.	31,049	26,998	27,148	27,329	27,369	27,389	27,419	27,634	27,697	27,709	27,709
SERC	21,180	30,976	31,171	31,312	31,684	31,785	34,095	34,104	34,051	34,052	34,052
SPP	2,943	5,693	5,693	5,741	5,849	5,849	5,849	5,850	5,850	5,850	5,849
WSCC—U.S.	184,915[b]	158,294	161,959	164,156	165,176	166,923	164,752	168,419	168,798	171,301	169,730
NERC—U.S.	260,994	243,243	247,916	250,899	252,730	255,016	255,223	259,235	259,749	262,398	260,955
MAPP—Canada	16,915	22,714	22,749	22,821	22,977	23,551	23,607	23,648	23,637	23,635	23,841
NPCC—Canada	119,186	125,418	137,625	149,236	161,735	167,480	166,729	170,089	178,172	186,178	195,985
WSCC—Canada	44,550	38,217	39,745	43,732	46,177	48,449	50,833	51,057	52,256	52,455	53,223
NERC—Total	441,645	429,592	448,035	466,688	483,619	494,496	496,392	504,029	513,888	524,658	534,004

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

HYDRO[a]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	26,356	23,548	23,608	23,719	23,749	23,769	23,799	24,014	24,077	24,089	24,089
New England	4,693	3,450	3,540	3,610	3,620	3,620	3,620	3,620	3,620	3,620	3,620
NPCC—U.S.	31,049	26,998	27,148	27,329	27,369	27,389	27,419	27,634	27,697	27,709	27,709
New Brunswick	3,549	2,685	2,748	2,752	2,752	2,752	2,752	2,752	2,752	2,752	2,752
Ontario	35,250	35,351	35,793	35,620	35,532	35,532	35,532	35,018	35,304	36,116	36,773
Québec	80,387	87,382	99,084	110,864	123,451	129,196	128,445	132,319	140,116	147,310	156,460
NPCC—Canada	119,186	125,418	137,625	149,236	161,735	167,480	166,729	170,089	178,172	186,178	195,985
Florida	203	203	207	230	230	230	230	230	230	230	230
Southern	5,460	7,774	7,874	7,961	8,174	8,275	10,581	10,590	10,539	10,539	10,539
TVA	12,078	17,732	17,732	17,732	17,732	17,732	17,732	17,732	17,732	17,732	17,732
VACAR	3,439	5,267	5,358	5,389	5,548	5,548	5,552	5,552	5,551	5,552	5,552
SERC	21,180	30,976	31,171	31,312	31,684	31,785	34,095	34,104	34,051	34,052	34,052
Group A	140	217	217	265	303	303	303	304	304	304	303
Group B	2,779	5,416	5,416	5,416	5,486	5,486	5,486	5,486	5,486	5,486	5,486
Group C	24	60	60	60	60	60	60	60	60	60	60
SPP	2,943	5,693	5,693	5,741	5,849	5,849	5,849	5,850	5,850	5,850	5,849
NWPP—U.S.	142,430[b]	121,416	123,214	122,864	123,577	124,953	122,883	125,704	125,613	128,022	126,361
RMPA	8,680	8,617	8,524	8,579	8,582	8,610	8,623	8,605	8,588	8,570	8,551
AZ-NM	2,707	2,340	2,725	2,472	2,479	2,487	2,499	2,507	2,515	2,527	2,533
CA-NV	31,098	25,921	27,496	30,241	30,538	30,873	31,547	31,603	32,062	32,182	32,285
WSCC—U.S.	184,915[b]	158,294	161,959	164,156	165,176	166,923	164,752	168,419	168,798	171,301	169,730

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

PUMPED STORAGE LOAD (–)

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	2,203	3,659	3,659	3,659	3,659	4,211	4,763	4,763	4,763	4,763	4,763
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	2,357	1,876	2,233	2,843	2,953	3,123	3,270	3,223	3,123	3,306	3,244
MAIN	34	119	125	167	156	185	241	232	242	199	190
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	4,863	2,937	3,160	3,445	3,793	4,443	4,453	5,343	5,122	5,254	4,997
SERC	3,787	3,573	3,605	3,900	3,518	5,052	7,569	7,970	7,405	8,743	9,621
SPP	181	426	426	426	426	426	426	426	426	426	426
WSCC—U.S.	1,484	1,142	1,194	1,316	1,534	1,588	1,793	1,900	2,019	2,197	2,244
NERC—U.S.	14,909	13,732	14,402	15,756	16,039	19,028	22,515	23,857	23,100	24,888	25,485
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	115	0	0	0	0	0	0	50	150	250	250
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	15,024	13,732	14,402	15,756	16,039	19,028	22,515	23,907	23,250	25,138	25,735

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

PUMPED STORAGE LOAD (–)

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	3,683	1,460	1,460	1,485	1,443	1,443	1,453	2,343	2,122	2,254	1,997
New England	1,180	1,477	1,700	1,960	2,350	3,000	3,000	3,000	3,000	3,000	3,000
NPCC—U.S.	4,863	2,937	3,160	3,445	3,793	4,443	4,453	5,343	5,122	5,254	4,997
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	115	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	50	150	250	250
NPCC—Canada	115	0	0	0	0	0	0	50	150	250	250
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	387	315	315	315	315	315	2,179	2,563	1,732	2,236	2,595
TVA	1,671	1,695	1,741	1,568	1,165	1,230	1,172	1,194	1,237	1,219	1,125
VACAR	1,729	1,563	1,549	2,017	2,038	3,507	4,218	4,213	4,436	5,288	5,901
SERC	3,787	3,573	3,605	3,900	3,518	5,052	7,569	7,970	7,405	8,743	9,621
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	181	426	426	426	426	426	426	426	426	426	426
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	181	426	426	426	426	426	426	426	426	426	426
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	338	467	587	696	705	710	731	736	740	726	691
AZ-NM	208	144	171	192	192	167	198	184	206	218	158
CA-NV[c]	938	531	436	428	637	711	864	980	1,073	1,253	1,395
WSCC—U.S.	1,484	1,142	1,194	1,316	1,534	1,588	1,793	1,900	2,019	2,197	2,244

Regional: Net Electrical Energy Generation — Million kWhr

PUMPED STORAGE OUTPUT (+) TABLE 22

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	1,595	2,439	2,439	2,439	2,439	2,907	3,173	3,173	3,175	3,175	3,173
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1,595	1,318	1,568	1,983	2,058	2,188	2,284	2,249	2,188	2,269	2,265
MAIN	11	54	57	77	74	84	111	104	108	92	84
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	3,415	2,877	2,222	2,426	2,658	3,118	3,117	3,798	3,652	3,734	3,547
SERC	2,917	2,709	2,719	2,953	2,654	3,854	5,754	6,879	5,651	6,658	7,363
SPP	97	257	257	257	257	257	257	257	257	257	257
WSCC—U.S.	1,201	1,888	1,496	1,566	1,668	1,516	1,649	1,834	2,069	2,194	2,233
NERC—U.S.	10,821	10,646	10,758	11,701	11,808	13,808	16,347	17,496	17,108	18,411	18,864
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	10,821	10,646	10,758	11,701	11,808	13,808	16,347	17,496	17,108	18,411	18,864

Subregional: Net Electrical Energy Generation — Million kWhr

PUMPED STORAGE OUTPUT (+) TABLE 22S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	2,578	1,922	1,922	1,946	1,918	1,918	1,917	1,698	1,552	1,634	1,447
New England	837	1,055	1,200	1,380	1,640	2,188	2,188	2,188	2,188	2,188	2,188
NPCC—U.S.	3,415	2,977	3,222	3,426	3,658	3,118	3,117	3,798	3,652	3,734	3,547
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	280	236	236	236	236	236	1,629	1,938	1,313	1,698	1,995
TVA	1,322	1,313	1,348	1,215	902	952	908	925	937	943	870
VACAR	1,315	1,160	1,135	1,502	1,516	2,666	2,217	3,216	3,301	4,017	4,478
SERC	2,917	2,709	2,719	2,953	2,654	3,854	5,754	6,879	5,651	6,658	7,363
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	97	257	257	257	257	257	257	257	257	257	257
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	97	257	257	257	257	257	257	257	257	257	257
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	190	252	311	390	394	397	408	410	412	405	387
AZ-NM	147	181	119	135	134	117	139	129	144	152	110
CA-NV[1]	874	1,447	1,066	1,041	1,140	1,002	1,102	1,295	1,513	1,637	1,736
WSCC—U.S.	1,201	1,888	1,496	1,566	1,668	1,516	1,649	1,834	2,069	2,194	2,233

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

GEOTHERMAL	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	5,687	6,568	8,356	9,780	10,901	12,319	13,563	14,953	17,274	18,071	18,940
NERC—U.S.	5,687	6,568	8,356	9,780	10,901	12,319	13,563	14,953	17,274	18,071	18,940
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	5,687	6,568	8,356	9,780	10,901	12,319	13,563	14,953	17,274	18,071	18,940

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

GEOTHERMAL	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP—U.S.	0	0	0	25	25	25	25	25	25	25	25
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	110	220	329	439	549	769	878	790	875
CA-NV	5,687	6,568	8,246	9,535	10,547	11,855	12,989	14,159	16,371	17,256	18,040
WSCC—U.S.	5,687	6,568	8,356	9,780	10,901	12,319	13,563	14,953	17,274	18,071	18,940

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

STEAM — COAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	347,584	348,121	361,783	361,484	360,841	371,394	374,811	382,642	391,326	397,368	409,041
ERCOT	59,436	62,168	65,835	67,893	67,575	72,112	79,621	86,255	96,276	108,076	119,577
MAAC	83,247	91,783	90,660	95,795	96,981	97,399	94,111	94,317	95,869	97,458	102,446
MAIN	108,457	115,815	114,378	108,458	107,795	106,637	109,595	108,212	113,442	119,002	121,261
MAPP—U.S.	65,908	69,115	74,847	79,498	83,938	88,649	91,904	94,643	98,384	101,235	105,824
NPCC—U.S.	24,005	33,370	39,390	39,045	48,280	55,455	59,090	63,839	66,120	69,873	72,164
SERC	285,949	291,156	304,300	306,587	324,757	332,121	339,377	341,329	352,674	361,323	369,062
SPP	78,974	90,115	105,478	108,917	117,483	122,101	126,254	133,283	141,147	153,434	165,874
WSCC—U.S.	123,923	139,303	142,980	144,017	149,233	155,443	163,873	178,194	190,341	207,114	221,314
NERC—U.S.	1,177,483	1,240,946	1,299,651	1,311,694	1,356,883	1,401,311	1,438,636	1,482,714	1,545,579	1,614,883	1,686,563
MAPP—Canada	6,162	7,267	8,204	8,526	9,157	9,165	9,478	8,580	8,650	9,240	9,712
NPCC—Canada	32,993	39,616	39,356	28,398	31,713	25,628	30,440	26,776	25,206	20,063	20,508
WSCC—Canada	17,462	20,467	22,923	25,258	20,277	32,186	34,635	35,953	38,735	42,902	46,401
NERC—Total	1,234,100	1,308,296	1,370,134	1,373,876	1,426,030	1,468,290	1,513,189	1,554,023	1,618,170	1,687,088	1,763,184

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

STEAM — COAL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	19,503	22,570	26,430	24,620	30,860	33,980	36,890	41,639	43,520	44,973	47,264
New England	4,502	10,800	12,960	14,425	17,420	21,475	22,200	22,200	22,600	24,900	24,900
NPCC—U.S.	24,005	33,370	39,390	39,045	48,280	55,455	59,090	63,839	66,120	69,873	72,164
New Brunswick	629	590	702	742	729	799	882	762	1,199	1,200	1,172
Ontario	32,164	39,026	38,654	27,656	30,984	24,829	29,558	26,014	24,007	18,863	19,336
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	32,993	39,616	39,356	28,398	31,713	25,628	30,440	26,776	25,206	20,063	20,508
Florida	14,718	18,094	23,110	25,517	33,047	37,954	41,473	45,119	50,551	53,259	55,851
Southern	93,034	96,740	107,291	112,186	123,246	127,850	128,615	129,040	130,341	135,203	139,974
TVA	80,424	78,043	79,925	75,226	73,957	73,352	68,935	65,380	66,513	63,165	58,468
VACAR	96,973	96,279	93,974	93,658	94,507	92,965	100,354	101,790	105,269	109,696	114,769
SERC	285,949	291,156	304,300	306,587	324,757	332,121	339,377	341,329	352,674	361,323	369,062
Group A	11,457	15,714	21,991	22,700	27,224	28,214	30,806	34,688	36,289	42,719	48,025
Group B	26,403	32,272	36,453	39,424	43,492	46,705	46,259	47,655	52,836	56,513	62,223
Group C	41,114	42,129	47,034	46,793	46,767	47,182	49,189	50,940	52,022	54,202	55,626
SPP	78,974	90,115	105,478	108,917	117,483	122,101	126,254	133,283	141,147	153,434	165,874
NWPP—U.S.	45,251	52,388	55,936	58,709	62,374	66,200	68,150	73,238	77,756	80,273	83,890
RMPA	22,278	24,709	27,194	29,129	31,574	33,111	35,423	37,346	40,296	42,265	44,591
AZ-NM	36,500	38,295	35,939	32,037	33,240	32,567	33,544	36,474	35,947	38,961	42,053
CA-NV	19,694	23,911	23,911	24,142	22,045	23,565	26,756	31,136	36,342	45,615	50,780
WSCC—U.S.	123,923	139,303	142,980	144,017	149,233	155,443	163,873	178,194	190,341	207,114	221,314

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

STEAM — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	3,288	4,735	5,015	5,369	5,369	5,369	5,369	5,369	5,369	5,369	5,313
ERCOT	459	1,057	2,180	2,461	3,064	1,678	2,241	7,120	5,278	2,127	5,163
MAAC	21,101	18,478	14,559	10,168	10,053	11,514	9,997	7,898	10,035	10,094	10,352
MAIN	5,407	3,834	3,408	2,954	2,222	1,643	1,958	1,818	2,488	3,035	3,166
MAPP—U.S.	150	110	110	110	122	132	161	133	150	180	194
NPCC—U.S.	77,163	72,805	66,004	62,748	56,444	49,298	37,138	37,744	40,251	40,805	43,996
SERC	30,188	46,128	38,074	34,274	25,116	25,432	28,556	30,341	33,870	34,061	33,912
SPP	5,185	1,812	2,247	3,315	4,912	9,742	12,985	11,210	11,068	10,458	9,402
WSCC—U.S.	27,481	28,954	29,419	28,822	31,387	36,141	34,731	31,859	28,107	31,476	30,374
NERC—U.S.	190,422	177,913	161,016	150,221	138,695	140,949	133,136	133,492	136,616	137,605	141,872
MAPP—Canada	65	18	18	18	18	18	18	18	18	18	18
NPCC—Canada	842	1,404	1,372	1,398	1,583	1,715	1,891	3,560	6,167	6,159	4,369
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	191,329	179,335	162,406	151,637	140,296	142,682	135,045	137,070	142,801	143,782	146,259

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

STEAM — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	36,307	34,810	28,763	28,942	24,823	25,732	21,024	19,266	19,335	20,175	20,296
New England	40,856	37,995	37,241	33,806	31,621	23,566	16,114	18,478	20,916	20,630	23,700
NPCC—U.S.	77,163	72,805	66,004	62,748	56,444	49,298	37,138	37,744	40,251	40,805	43,996
New Brunswick	743	1,284	1,211	1,298	1,483	1,615	1,751	3,240	5,493	5,274	3,769
Ontario	96	84	61	0	0	0	0	0	0	0	0
Québec	3	36	100	100	100	100	140	320	674	885	600
NPCC—Canada	842	1,404	1,372	1,398	1,583	1,715	1,891	3,560	6,167	6,159	4,369
Florida	45,557	43,123	35,307	31,811	21,294	22,238	25,744	27,278	30,843	31,345	31,292
Southern	179	139	255	301	774	899	293	332	217	278	340
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	4,452	2,866	2,512	2,162	3,048	2,275	2,519	2,731	2,810	2,238	2,280
SERC	50,188	46,128	38,074	34,274	25,116	25,432	28,556	30,341	33,870	34,061	33,912
Group A	4,966	1,085	1,734	2,822	4,393	9,222	11,301	8,748	8,916	8,861	7,242
Group B	25	596	372	377	382	388	1,527	2,311	1,914	2,054	1,850
Group C	294	131	141	116	137	132	157	151	238	343	310
SPP	5,185	1,812	2,247	3,315	4,912	9,742	12,985	11,210	11,068	10,458	9,402
NWPP—U.S.	8	0	137	100	100	0	0	0	0	0	0
RMPA	13	28	43	16	16	16	16	14	14	17	79
AZ-NM	193	1,831	1,407	1,007	2,822	2,790	2,830	2,526	2,651	3,286	2,895
CA-NV	27,267	27,095	27,832	27,699	28,449	33,335	31,885	29,319	25,442	28,173	27,400
WSCC—U.S.	27,481	28,954	29,419	28,822	31,387	36,141	34,731	31,859	28,107	31,476	30,374

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

STEAM — GAS	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	885	125	125	25	25	25	25	25	25	25	25
ERCOT	97,432	103,567	106,917	108,695	111,991	110,421	107,524	102,136	99,450	98,283	93,099
MAAC	6,364	5,862	5,546	2,327	1,990	2,078	1,870	1,804	1,823	1,814	1,897
MAIN	709	791	730	416	158	125	132	133	143	145	122
MAPP—U.S.	376	150	86	103	95	143	159	145	84	119	104
NPCC—U.S.	17,410	9,595	7,487	3,725	3,324	882	546	0	0	0	0
SERC	16,147	12,110	11,727	11,260	11,034	11,554	10,234	7,414	3,230	3,260	3,132
SPP	107,673	102,930	91,650	88,761	79,058	77,600	77,062	68,201	71,066	68,612	68,505
WSCC—U.S.	73,160	75,391	58,015	48,289	44,438	37,966	37,054	38,363	39,603	34,627	34,302
NERC—U.S.	320,156	310,529	282,283	263,601	252,113	240,794	234,606	218,221	215,424	206,885	201,186
MAPP—Canada	386	201	124	117	152	147	338	224	219	182	149
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	2,698	6,213	6,095	6,363	6,297	5,512	4,991	5,039	5,218	5,662	6,220
NERC—Total	323,440	316,943	288,492	270,081	258,562	246,453	239,927	223,484	220,861	212,729	207,555

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

STEAM — GAS	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	16,560	9,595	7,487	3,725	3,324	882	546	0	0	0	0
New England[d]	850	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	17,410	9,595	7,487	3,725	3,324	882	546	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	14,847	11,032	10,511	10,103	9,416	9,730	8,606	6,124	2,383	2,306	2,347
Southern	1,058	790	867	893	1,391	1,634	1,409	1,055	781	845	710
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	242	288	349	184	227	190	225	235	146	109	75
SERC	16,147	12,110	11,727	11,260	11,034	11,554	10,234	7,414	3,230	3,260	3,132
Group A	62,137	62,369	54,193	54,148	45,218	43,994	43,754	35,541	39,117	36,362	36,373
Group B	39,886	34,890	33,010	32,149	31,272	30,675	30,799	29,899	28,690	28,985	28,480
Group C	5,650	5,671	4,447	2,464	2,568	2,931	2,509	2,761	3,259	3,065	3,452
SPP	107,673	102,930	91,650	88,761	79,058	77,600	77,062	68,201	71,066	68,612	68,505
NWPP—U.S.	268	0	129	248	250	100	50	50	50	50	50
RMPA	656	591	683	627	712	755	748	759	693	757	515
AZ-NM	7,938	4,864	4,190	3,997	3,307	2,792	3,329	3,165	1,375	912	1,004
CA-NV	64,298	69,936	53,013	43,417	40,169	34,319	32,927	34,389	37,485	32,908	32,733
WSCC—U.S.	73,160	75,391	58,015	48,289	44,438	37,966	37,054	38,363	39,603	34,627	34,302

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

COMBUSTION TURBINE — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	231	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,024
ERCOT	31	10	0	0	0	0	0	0	0	0	0
MAAC	957	414	291	152	122	274	221	136	279	273	298
MAIN	91	342	246	379	303	258	313	391	573	703	952
MAPP—U.S.	18	48	45	62	115	120	191	175	225	331	290
NPCC—U.S.	353	370	290	300	390	310	320	310	250	320	300
SERC	1,442	2,107	1,665	1,569	2,331	2,037	1,010	946	1,444	1,812	1,861
SPP	54	148	138	241	200	392	914	1,425	1,216	1,217	1,353
WSCC—U.S.	294	338	733	505	1,015	429	433	351	375	380	313
NERC—U.S.	3,471	4,787	4,418	4,218	5,486	5,630	4,412	4,752	5,372	6,0[illegible]	6,391
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	192	198	212	230	251	215	229	221	244	854	267
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	3,663	4,985	4,630	4,448	5,737	5,845	4,641	4,973	5,616	6,900	6,658

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

COMBUSTION TURBINE — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	246	260	180	200	290	210	220	210	150	220	200
New England	107	110	110	100	100	100	100	100	100	100	100
NPCC—U.S.	353	370	290	300	390	310	320	310	250	320	300
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	12	14	18	20	24	25	26	4	3	2	1
Québec	180	184	194	210	227	190	203	217	241	852	266
NPCC—Canada	192	198	212	230	251	215	229	221	244	854	267
Florida	934	684	350	470	284	213	347	316	795	984	882
Southern	92	153	310	444	1,564	2,225	152	195	98	286	328
TVA	118	959	624	266	103	82	59	42	46	35	16
VACAR	298	311	381	389	380	317	452	393	505	507	635
SERC	1,442	2,107	1,665	1,569	2,331	2,837	1,010	946	1,444	1,812	1,861
Group A	13	0	0	0	0	78	55	69	72	78	126
Group B	3	25	25	25	24	24	627	974	783	766	766
Group C	38	123	113	216	176	290	232	382	361	381	461
SPP	54	148	138	241	200	392	914	1,425	1,216	1,217	1,353
NWPP—U.S.	2	0	260	200	200	0	0	0	0	0	0
RMPA	2	4	7	11	11	11	11	11	11	11	11
AZ-NM	1	100	84	54	170	170	183	181	127	133	66
CA-NV	289	234	382	240	634	840	239	239	237	236	236
WSCC—U.S.	294	338	733	505	1,015	429	433	351	375	380	313

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

COMBUSTION TURBINE — GAS[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	346	566	569	569	569	569	569	569	569	569	569
ERCOT	378	337	445	517	615	850	585	1,129	900	939	1,070
MAAC	1,248	553	339	128	88	100	81	50	64	57	49
MAIN	441	288	336	276	225	160	189	168	217	297	227
MAPP—U.S.	160	23	25	34	41	29	34	37	24	28	38
NPCC—U.S.	47	0	0	0	0	0	0	0	0	0	0
SERC	767	517	368	442	523	508	241	210	158	172	107
SPP	2,224	388	316	374	308	458	377	464	500	474	496
WSCC—U.S.	1,185	1,498	1,911	1,683	2,046	2,017	1,788	1,681	1,500	1,441	1,263
NERC—U.S.	6,796	4,170	4,309	4,023	4,415	4,691	3,864	4,308	3,932	3,977	3,819
MAPP—Canada	11	6	17	12	25	27	50	34	33	35	27
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	801	698	707	713	719	711	706	709	711	711	712
NERC—Total	7,608	4,874	5,033	4,748	5,159	5,429	4,620	5,051	4,676	4,723	4,558

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

COMBUSTION TURBINE — GAS[c]

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England[d]	47	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	47	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	220	81	38	39	25	22	31	18	10	15	12
Southern	266	271	284	308	417	376	31	31	31	31	31
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	281	165	46	95	81	110	179	161	117	126	64
SERC	767	517	368	442	523	508	241	210	158	172	107
Group A	33	66	92	153	72	170	72	41	49	47	46
Group B	1,903	20	20	20	20	20	20	23	23	23	23
Group C	288	302	204	201	216	268	285	400	428	404	427
SPP	2,224	388	316	374	308	458	377	464	500	474	496
NWPP—U.S.	31	0	112	100	100	100	50	50	50	50	50
RMPA	119	127	342	204	369	452	429	409	342	388	200
AZ-NM	404	544	365	349	219	169	207	248	123	19	12
CA-NV	631	827	1,092	1,030	1,358	1,296	1,102	974	985	984	1,001
WSCC—U.S.	1,185	1,498	1,911	1,683	2,046	2,017	1,788	1,681	1,500	1,441	1,263

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

COMBINED CYCLE — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	556	556	556	556	556	556	556	556	556	556	556
ERCOT	3	21	2	2	2	2	2	2	2	2	2
MAAC	239	63	47	13	7	6	5	3	4	4	3
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	1	1	0	0	0	0	1	2	2	2	2
NPCC—U.S.	340	800	800	700	700	600	600	600	600	500	500
SERC	615	581	721	0	0	0	0	0	2,048	2,128	2,139
SPP	0	0	180	180	184	195	194	187	196	248	235
WSCC—U.S.	30	232	181	154	291	213	204	129	146	937	765
NERC—U.S.	1,784	2,254	2,487	1,605	1,740	1,574	1,562	1,479	3,554	4,377	4,202
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,784	2,254	2,487	1,605	1,740	1,574	1,562	1,479	3,554	4,377	4,202

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

COMBINED CYCLE — OIL

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	340	800	800	700	700	600	600	600	600	500	500
NPCC—U.S.	340	800	800	700	700	600	600	600	600	500	500
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	615	581	721	0	0	0	0	0	2,048	2,128	2,139
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	615	581	721	0	0	0	0	0	2,048	2,128	2,139
Group A	0	0	180	180	183	186	190	182	186	198	185
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	1	9	4	5	10	50	50
SPP	0	0	180	180	184	195	194	187	196	248	235
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	30	220	167	138	275	197	188	114	132	923	754
CA-NV	0	12	14	16	16	16	16	15	14	14	11
WSCC—U.S.	30	232	181	154	291	213	204	129	146	937	765

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

COMBINED CYCLE — GAS

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	5,146	4,160	4,056	3,953	3,955	4,171	3,944	4,064	3,721	3,788	3,814
MAAC	370	565	423	119	62	72	44	26	40	35	29
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	10	0	0	0	0	0	0	2	6	23	13
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	185	1,990	2,499	2,447	1,953	2,255	2,364	2,356	176	159	143
SPP	3,602	4,596	3,629	3,298	3,097	3,016	2,916	3,234	3,195	3,350	3,439
WSCC—U.S.	4,974	4,813	6,017	6,610	6,254	5,235	4,639	4,501	4,706	3,614	3,417
NERC—U.S.	14,287	16,124	16,624	16,427	15,321	14,749	13,807	14,203	11,844	10,969	10,855
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	14,287	16,124	16,624	16,427	15,321	14,749	13,807	14,203	11,844	10,969	10,855

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

COMBINED CYCLE — GAS

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	185	1,990	2,499	2,447	1,953	2,255	2,364	2,356	176	159	143
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	185	1,990	2,499	2,447	1,953	2,255	2,364	2,356	176	159	143
Group A	888	992	92	92	93	93	92	93	92	94	92
Group B	2,690	3,542	3,473	3,142	2,944	2,860	2,767	3,079	3,042	3,250	3,341
Group C	24	62	64	64	60	63	57	62	61	6	6
SPP	3,602	4,596	3,629	3,298	3,097	3,016	2,916	3,234	3,195	3,350	3,439
NWPP—U.S.	18	494	1,526	1,500	1,500	500	200	100	100	100	50
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	1,507	1,411	1,451	1,587	1,233	1,201	909	892	1,109	69	66
CA-NV	3,449	2,918	3,040	3,523	3,521	3,534	3,530	3,509	3,497	3,445	3,301
WSCC—U.S.	4,974	4,813	6,017	6,610	6,254	5,235	4,639	4,501	4,706	3,614	3,417

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

OTHER

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	1,017	1,040	1,041	1,027	1,469	1,645	1,028	838	835	835	835
MAIN[f]	532	445	437	511	577	626	687	738	816	805	885
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	42	60	180	215	435	535	535	776	1,115	1,115	1,115
SERC	739	660	590	695	986	1,319	565	678	1,379	2,052	2,527
SPP	967	902	902	923	924	924	914	1,971	1,982	2,024	1,925
WSCC[f]—U.S.	5,629	21,431	23,235	24,622	30,271	31,331	32,580	33,099	34,492	31,826	34,376
NERC—U.S.	9,126	24,538	26,385	28,393	34,662	36,380	36,309	38,120	40,619	38,657	41,663
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	144	289	493	612	747	795	955
WSCC—Canada	1,215	300	1,200	0	0	0	0	900	1,425	375	0
NERC—Total	10,341	24,838	27,585	28,393	34,806	36,669	36,802	39,632	42,791	39,827	42,618

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

OTHER

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York[g]	0	60	180	215	435	535	535	776	1,115	1,115	1,115
New England	42	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	42	60	180	215	435	535	535	776	1,115	1,115	1,115
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[h]	0	0	0	0	144	289	493	612	747	795	955
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	144	289	493	612	747	795	955
Florida	32	360	364	525	475	478	498	618	1,328	2,001	2,480
Southern[i]	773	300	195	302	473	795	0	0	0	0	0
TVA[j]	-66	0	0	0	0	0	0	0	0	0	0
VACAR[k]	0	0	31	68	38	46	67	60	51	51	47
SERC	739	660	590	695	986	1,319	565	678	1,379	2,052	2,527
Group A	686	604	604	604	604	604	604	604	604	604	604
Group B	281	298	298	319	320	320	310	1,367	1,378	1,420	1,321
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	967	902	902	923	924	924	914	1,971	1,982	2,024	1,925
NWPP—U.S.	737	342	929	1,851	2,050	2,050	1,250	1,250	1,250	1,250	1,250
RMPA	99	96	152	213	270	315	342	378	0	0	23
AZ-NM	-3,189	13	681	730	427	110	-261	-722	-734	-707	-594
CA-NV[f]	8,182	20,980	21,473	22,028	27,524	28,856	31,249	32,193	33,976	31,283	33,697
WSCC—U.S.	5,629	21,431	23,235	24,622	30,271	31,331	32,580	33,099	34,492	31,826	34,376

Regional: Net Electrical Energy Generation — Million kWhr

TABLE 22

TOTAL NET GENERATION

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	380,869	382,643	399,219	420,192	430,677	444,580	458,484	474,103	488,023	500,128	513,332
ERCOT	163,386	171,623	179,738	189,134	196,734	205,295	215,648	224,373	233,386	242,573	252,138
MAAC	149,668	156,938	167,628	168,776	176,324	183,762	188,646	194,183	198,487	203,118	207,788
MAIN	155,128	163,111	168,992	179,431	184,805	189,439	194,761	197,841	201,684	207,431	212,767
MAPP—U.S.	100,560	107,615	114,297	118,758	123,753	128,807	131,046	134,338	139,219	141,225	145,730
NPCC—U.S.	192,207	192,066	195,311	191,033	195,489	200,666	203,709	209,631	215,438	221,003	226,535
SERC	467,727	493,068	521,891	541,548	561,996	580,740	596,832	613,988	633,644	653,602	674,630
SPP	210,726	218,393	229,455	236,177	238,991	250,121	259,698	261,726	274,603	285,525	296,219
WSCC—U.S.	439,832	462,137	472,763	485,527	502,836	519,881	538,994	558,265	574,066	589,570	606,411
NERC—U.S.	2,260,103	2,347,594	2,449,294	2,530,576	2,611,605	2,703,291	2,787,818	2,868,448	2,958,550	3,044,175	3,135,550
MAPP—Canada	23,539	30,206	31,112	31,494	32,329	32,908	33,483	32,504	32,557	33,110	33,747
NPCC—Canada	190,897	204,349	221,680	239,750	257,566	268,942	274,727	284,893	299,801	312,635	326,266
WSCC—Canada	66,926	65,895	70,660	76,066	81,470	86,858	91,165	94,458	98,339	102,105	106,556
NERC—Total	2,541,465	2,648,044	2,772,746	2,877,886	2,982,970	3,091,999	3,187,193	3,280,303	3,389,247	3,492,025	3,602,119

Subregional: Net Electrical Energy Generation — Million kWhr

TABLE 22S

TOTAL NET GENERATION

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	115,308	110,595	112,330	107,822	109,888	112,535	115,538	118,220	120,587	122,912	125,374
New England	76,899	81,471	82,981	83,211	85,601	88,131	88,171	91,411	94,851	98,091	101,161
NPCC—U.S.	192,207	192,066	195,311	191,033	195,489	200,666	203,709	209,631	215,438	221,003	226,535
New Brunswick	5,121	6,120	6,376	6,621	6,907	7,109	7,328	8,697	11,387	11,669	11,959
Ontario	105,206	110,627	114,849	118,046	122,972	128,438	134,702	139,481	143,624	148,260	153,322
Québec	80,570	87,602	100,455	115,083	127,687	133,395	132,697	136,715	144,790	152,706	160,985
NPCC—Canada	190,897	204,349	221,680	239,750	257,566	268,942	274,727	284,893	299,801	312,635	326,266
Florida	91,639	94,493	93,436	95,239	92,707	97,667	103,186	108,278	112,331	116,670	121,560
Southern	114,344	122,476	137,135	142,586	156,104	162,076	163,729	167,605	171,928	176,949	181,603
TVA	115,081	120,100	124,974	130,767	134,401	135,879	137,979	139,972	142,640	145,314	149,190
VACAR	146,663	155,999	166,346	172,956	178,784	185,118	191,938	198,053	206,725	214,669	222,197
SERC	467,727	493,068	521,891	541,548	561,996	580,740	596,832	613,988	633,644	653,602	674,630
Group A	89,488	93,025	98,494	102,344	100,388	107,570	113,447	110,196	118,048	122,552	126,372
Group B	73,966	76,890	78,898	80,703	83,771	86,309	87,626	90,625	93,983	98,328	103,321
Group C	47,352	48,478	52,063	53,130	54,832	56,234	58,625	60,905	62,572	64,645	66,526
SPP	210,726	218,393	229,455	236,177	238,991	250,121	259,698	261,726	274,603	285,525	296,219
NWPP—U.S.	197,218	185,830	190,920	198,132	205,068	212,123	220,155	228,640	233,507	238,450	243,738
RMPA	32,444	34,784	37,542	39,527	42,274	44,305	46,714	48,645	51,061	53,132	55,111
AZ-NM	46,030	49,575	49,708	50,177	55,102	57,491	60,901	63,975	63,554	66,465	69,295
CA-NV	164,140	191,948	194,593	197,691	200,392	205,962	211,224	217,005	225,944	231,523	238,267
WSCC—U.S.	439,832	462,137	472,763	485,527	502,836	519,881	538,994	558,265	574,066	589,570	606,411

Regional: Net Electrical Energy Requirements — Million kWhr

TABLE 22

ENERGY IMPORTS MINUS EXPORTS

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	-14,493	-4,243	-1,219	8	223	220	216	897	1,577	1,572	1,568
ERCOT	1,534	3,301	3,593	3,242	4,281	4,407	3,176	3,208	3,981	4,899	6,028
MAAC	25,000	22,817	16,440	20,153	17,700	14,982	14,405	13,685	14,200	14,276	14,225
MAIN	7,771	5,100	3,619	-1,806	-2,255	-2,065	-1,584	35	1,453	1,004	1,504
MAPP—U.S.	-4,253	-5,576	-6,670	-6,696	-6,115	-6,717	-4,770	-3,804	-4,481	-1,937	-1,704
NPCC—U.S.	10,413	12,096	12,486	19,946	19,696	19,576	22,316	21,756	21,436	21,096	20,786
SERC	15,868	1,276	-7,240	-5,574	-7,432	-9,987	-8,265	-6,544	-8,024	-8,073	-7,880
SPP	1,107	2,315	621	2,291	8,454	6,467	5,814	13,246	8,801	7,489	6,732
WSCC—U.S.	7,956	522	242	0	2,412	3,579	4,138	4,141	4,138	4,138	4,138
NERC—U.S.	50,903	37,608	21,872	31,564	36,964	30,462	35,446	46,620	43,081	44,464	45,397
MAPP—Canada	-1,326	-6,257	-6,026	-5,362	-4,673	-3,782	-3,332	-1,262	-309	136	518
NPCC—Canada	18,350	16,917	10,978	5,025	-440	4,775	12,387	16,194	15,210	17,294	18,515
WSCC—Canada	-7,907	-527	-351	0	0	0	0	0	0	0	0
NERC—Total	59,620	47,741	26,473	31,227	31,851	31,455	44,501	61,552	57,982	61,894	64,430

Subregional: Net Electrical Energy Requirements — Million kWhr

TABLE 22S

ENERGY IMPORTS MINUS EXPORTS

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	3,087	7,467	7,467	13,467	13,467	13,467	13,467	13,467	13,467	13,467	13,467
New England	7,326	4,629	5,019	6,479	6,229	6,109	8,849	8,289	7,969	7,629	7,319
NPCC—U.S.	10,413	12,096	12,486	19,946	19,696	19,576	22,316	21,756	21,436	21,096	20,786
New Brunswick	3,185	3,101	3,255	3,329	3,344	3,427	3,496	2,409	0	0	0
Ontario	-3,547	-5,582	-6,122	-5,321	-6,497	-7,757	-9,912	-10,000	-10,000	-10,000	-10,500
Québec	18,712	19,398	13,845	7,017	2,713	9,105	18,803	23,785	25,210	27,294	29,015
NPCC—Canada	18,350	16,917	10,978	5,025	-440	4,775	12,387	16,194	15,210	17,294	18,515
Florida	4,583	5,577	11,334	13,362	19,770	18,846	17,357	16,386	16,329	16,273	16,088
Southern	-2,929	-9,014	-19,738	-20,504	-29,592	-31,056	-28,193	-27,336	-27,352	-27,273	-27,054
TVA	3,964	240	-200	320	310	316	323	672	330	340	342
VACAR	10,250	4,473	1,364	1,248	2,080	1,907	2,248	3,734	2,669	2,587	2,744
SERC	15,868	1,276	-7,240	-5,574	-7,432	-9,987	-8,265	-6,544	-8,024	-8,073	-7,880
Group A	15,502	14,480	14,129	14,247	20,431	17,372	15,279	22,271	18,139	17,682	18,013
Group B	-11,191	-9,759	-9,133	-8,359	-8,605	-8,500	-7,132	-6,989	-7,282	-8,296	-9,592
Group C	-3,204	-2,406	-4,375	-3,597	-3,372	-2,605	-2,333	-2,036	-2,056	-1,897	-1,689
SPP	1,107	2,315	621	2,291	8,454	6,467	5,814	13,246	8,801	7,489	6,732
NWPP—U.S.	-21,569	-1,779	-529	-562	-670	-587	-1,041	-2,058	-1,921	-1,231	-962
RMPA	-1,922	-2,746	-2,880	-2,796	-2,782	-2,796	-2,795	-2,765	-2,735	-2,704	-2,675
AZ-NM	-1,146	-1,949	-1,136	-991	-1,547	-1,618	-2,385	-1,899	1,346	1,437	1,418
CA-NV	32,593	6,996	4,787	4,349	7,411	8,580	10,359	10,863	7,448	6,636	6,357
WSCC—U.S.	7,956	522	242	0	2,412	3,579	4,138	4,141	4,138	4,138	4,138

Regional: Net Electrical Energy Requirements — Million kWhr

TABLE 22

NET ENERGY FOR LOAD

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	366,376	378,400	398,000	420,200	430,900	444,800	458,700	475,000	489,600	501,700	514,900
ERCOT	164,920	174,924	183,331	192,376	201,015	209,702	218,824	227,581	237,367	247,472	258,166
MAAC	174,668	179,755	184,068	188,929	194,024	198,744	203,051	207,868	212,687	217,394	222,013
MAIN	162,699	168,211	172,611	177,625	182,350	187,374	193,177	197,876	203,137	208,435	214,271
MAPP—U.S.	96,307	102,039	107,627	112,062	117,638	122,090	126,276	130,534	134,738	139,288	144,026
NPCC—U.S.	202,620	204,162	207,797	210,979	215,185	220,242	226,025	231,387	236,874	242,699	247,321
SERC	483,395	494,344	514,651	535,974	554,564	570,753	588,567	607,444	625,628	645,529	666,750
SPP	211,633	220,708	230,076	238,468	247,445	256,588	265,512	274,972	283,484	293,614	302,951
WSCC—U.S.	447,788	462,659	473,005	485,527	505,248	523,460	543,132	562,406	578,204	593,708	610,549
NERC—U.S.	2,311,006	2,385,202	2,471,166	2,562,140	2,648,369	2,733,753	2,823,264	2,915,069	3,001,631	3,088,639	3,180,947
MAPP—Canada	22,013	23,949	25,086	26,132	27,636	29,126	30,131	31,242	32,248	33,246	34,265
NPCC—Canada	209,247	221,266	232,658	244,775	257,126	273,717	287,114	301,087	315,011	329,929	344,781
WSCC—Canada	59,019	65,368	70,309	76,066	81,470	86,858	91,165	94,458	98,339	102,105	106,556
NERC—Total	2,601,285	2,695,785	2,799,219	2,909,113	3,014,821	3,123,454	3,231,694	3,341,855	3,447,229	3,553,919	3,666,549

Subregional: Net Electrical Energy Requirements — Million kWhr

TABLE 22S

NET ENERGY FOR LOAD

	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	118,395	118,062	119,797	121,289	123,355	126,002	129,065	131,687	134,654	136,379	138,841
New England	84,225	86,100	87,000	89,690	91,830	94,240	97,026	99,700	102,020	105,720	108,480
NPCC—U.S.	202,620	204,162	207,797	210,979	215,185	220,242	226,025	231,387	236,874	242,699	247,321
New Brunswick	8,306	9,221	9,631	9,950	10,251	10,536	10,824	11,106	11,387	11,669	11,959
Ontario	101,659	105,045	108,727	112,725	116,475	120,681	124,790	129,481	133,624	138,260	142,822
Québec	99,282	107,000	114,300	122,100	130,400	142,500	151,500	160,500	170,000	180,000	190,000
NPCC—Canada	209,247	221,266	232,658	244,775	257,126	273,717	287,114	301,087	315,011	329,929	344,781
Florida	96,222	100,070	104,770	108,601	112,477	116,513	120,343	124,664	128,688	132,943	137,648
Southern	111,415	113,462	117,397	122,082	126,512	131,020	135,536	140,349	144,576	149,676	154,629
TVA	119,045	120,340	124,774	131,087	134,711	136,195	138,382	140,644	142,970	145,654	149,532
VACAR	156,913	160,472	167,710	174,204	180,864	187,025	194,186	201,787	209,394	217,256	224,941
SERC	483,595	494,344	514,651	535,974	554,564	570,753	588,567	607,444	625,628	645,529	666,750
Group A	104,910	107,505	112,623	116,591	120,619	125,158	128,726	132,467	136,187	140,234	144,385
Group B	62,775	67,131	69,765	72,344	75,166	77,809	80,494	83,636	86,701	90,032	93,729
Group C	44,148	46,072	47,688	49,533	51,460	53,629	56,292	58,869	60,516	62,748	64,837
SPP	211,833	220,708	230,076	238,468	247,445	256,588	265,512	274,972	283,484	293,614	302,951
NWPP—U.S.	175,649	184,051	190,391	197,570	204,398	211,536	219,114	226,982	231,986	237,219	242,776
RMPA	30,522	32,038	34,662	36,731	39,492	41,509	43,919	45,880	48,326	50,428	52,436
AZ-NM	44,884	47,626	48,572	49,186	53,355	55,873	58,516	62,076	64,988	67,982	70,712
CA-NV	196,733	198,944	199,380	202,040	207,803	214,542	221,983	227,868	233,392	238,159	244,624
WSCC—U.S.	447,788	462,659	473,005	485,527	505,248	523,460	543,132	562,406	578,204	593,708	610,549

Footnotes

a/ Adverse hydro is assumed for forecast years.

b/ Data for actual year can be greater than for forecast years if median hydro occurred. Adverse hydro is assumed for forecast years.

c/ Pumped storage output is greater than input due to a PS facility being in combination with a California reservoir which cannot be disaggregated.

d/ Estimated value. All gas use is interruptible; no firm purchases are anticipated in the future.

e/ Includes diesel.

f/ Includes cogeneration and wind generation.

g/ Refuse recovery.

h/ Parallel generation.

i/ Construction energy from new units.

j/ Nuclear pre-commercial.

k/ Propane.

l/ Reflects changes in seasonal exchange contracts in October 1983.

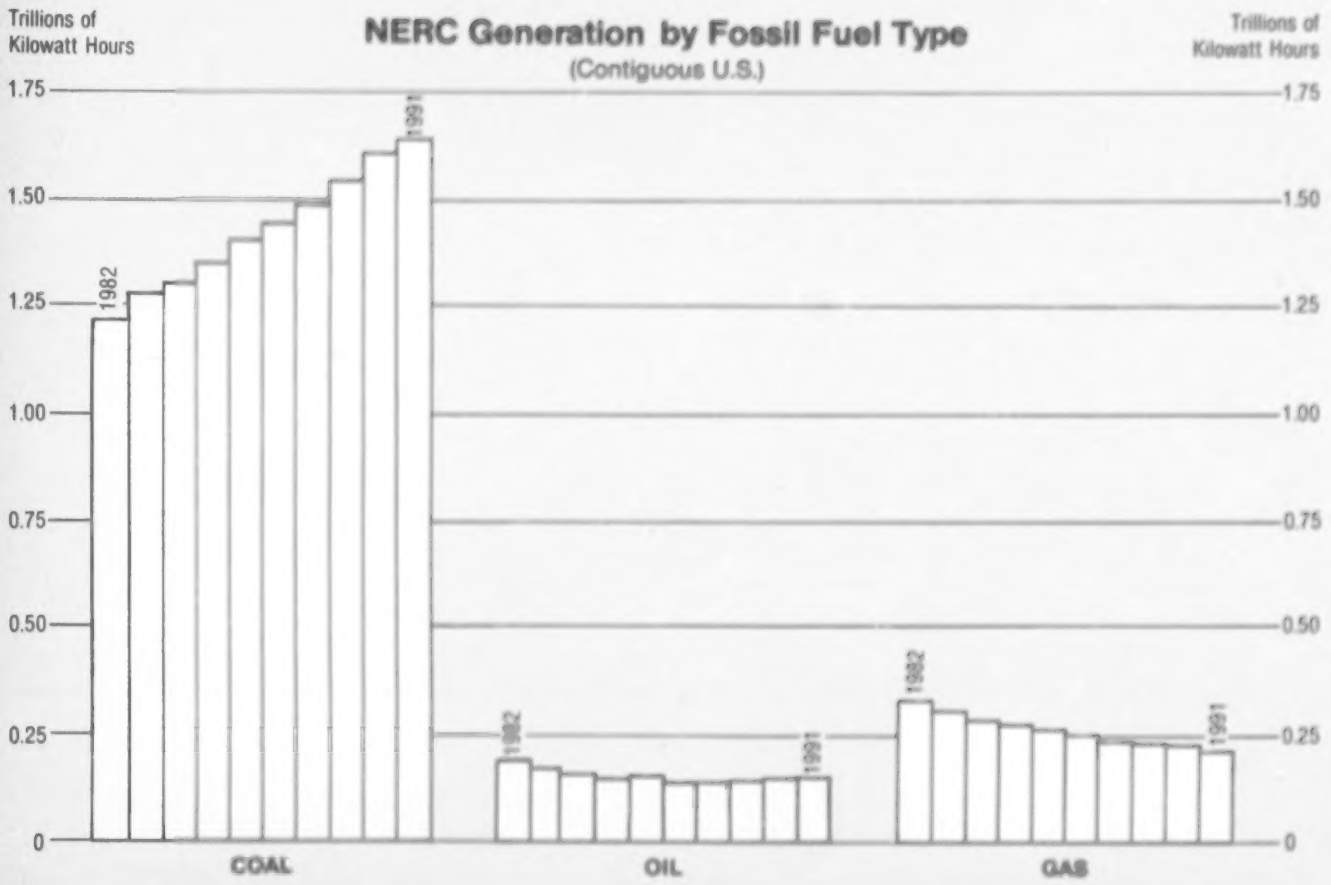
Estimated Fossil Fuel Requirements

The *Estimated Fossil Fuel Requirements* data provide a tabulation of fuel burned for 1981 and that expected to be burned for the 1982-1991 period for electric energy generation by coal, oil, and natural gas.

Coal data is presented by principal sources. Oil data is presented by oil types, with each type further divided into kinds of generating capacity. Firm Natural Gas and Interruptible Natural Gas are presented separately, with both gas categories further divided into generating capacity types.

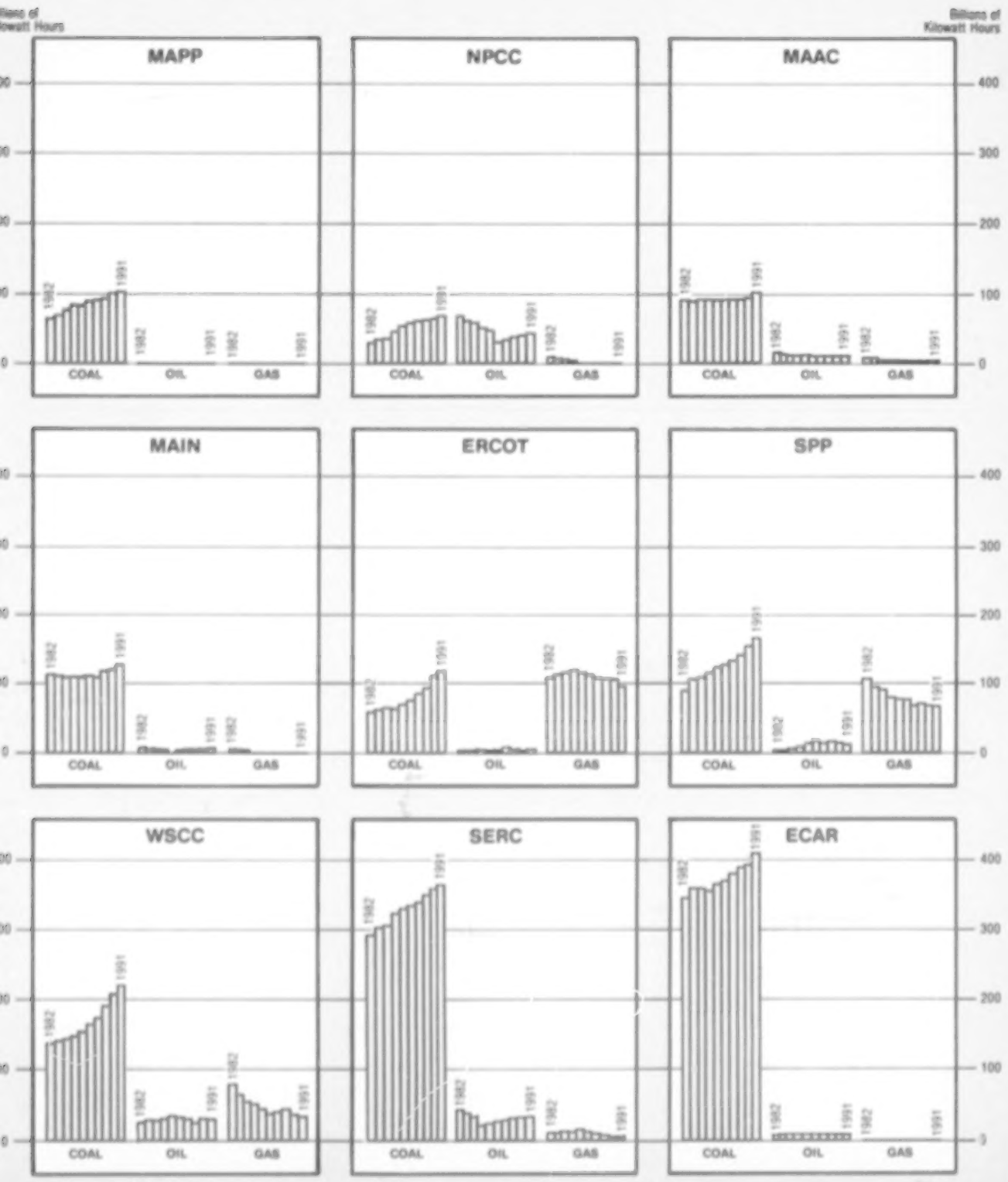
The changes in the fossil fuel requirements projected for 1982-1991 in the U.S. are as follows: total *Coal* expanding by 40.8% from 612,999,000 tons in 1982 to 862,964,000 tons in 1991; total *Oil* decreasing by 17.5% from 324,045,000 barrels in 1982 to 267,390,000 barrels in 1991; and *Natural Gas* dropping by 35.3% from 3,387,167,000 MCF in 1982 to 2,190,534,000 MCF in 1991.

For a breakdown by all principal fuel sources of the total net electrical energy requirements projected for this same period, refer to Table 22.

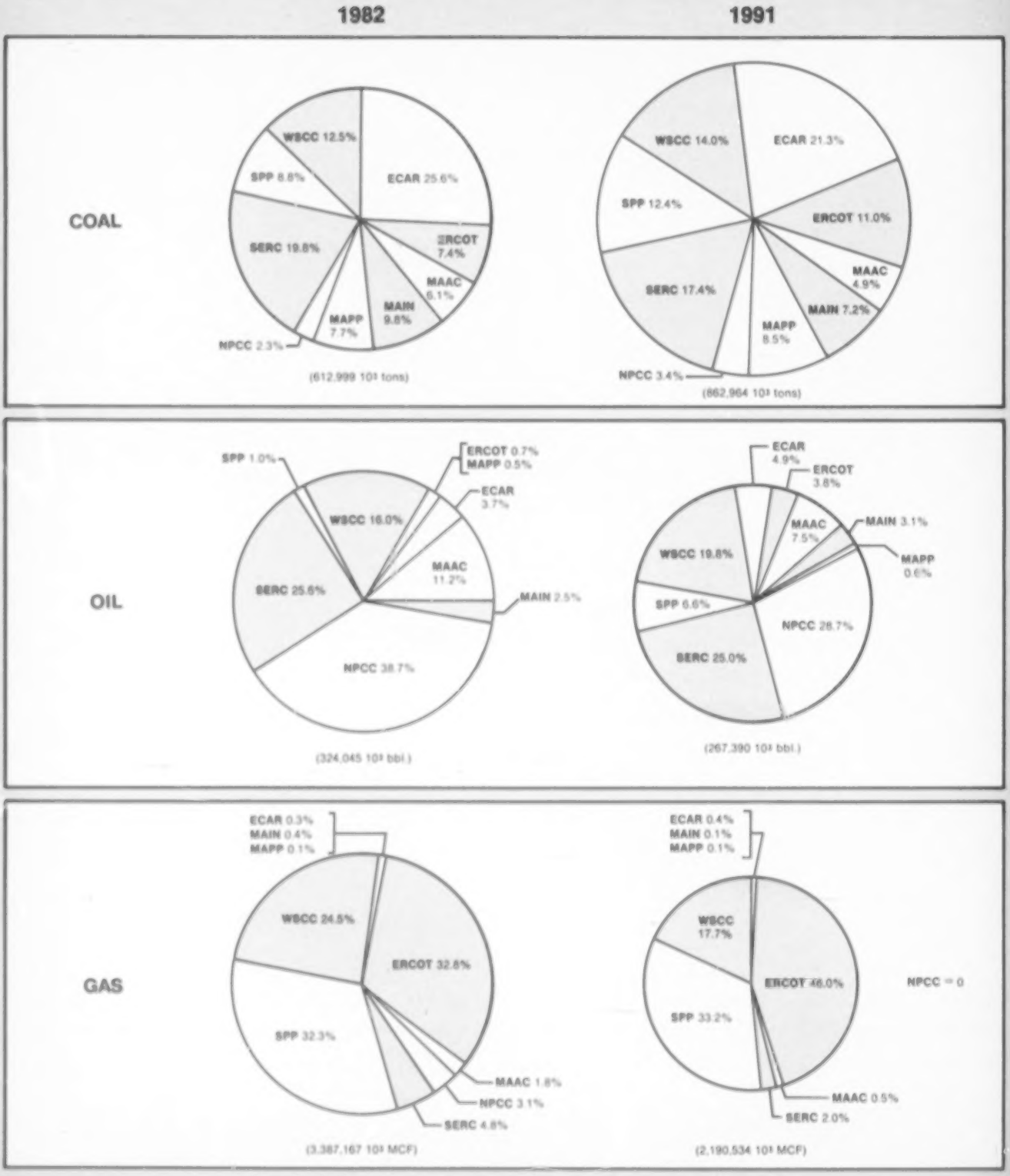


Regional Generation by Fossil Fuel Types

(Contiguous U.S.)



Fossil Fuel Requirements by NERC (U.S.) Region



Regional: Estimated Fossil Fuel Requirements — Coal

WESTERN LIGNITE — STEAM

1000 Tons

TABLE 23

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR[a]	–	–	–	–	–	–	–	–	–	–	–
ERCOT	28,677	29,818	31,323	32,686	32,972	35,244	40,937	46,456	57,520	68,040	71,526
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	14,121	17,474	19,007	21,181	22,904	24,299	24,797	26,174	27,994	28,839	29,754
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	740	1,479	
SPP	0	0	0	0	2,271	4,867	7,362	7,599	7,804	12,891	13,254
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
NERC—U.S.	42,798	47,292	50,330	53,867	58,147	64,410	73,096	80,229	93,318	110,510	116,013
MAPP—Canada	5,680	7,050	8,000	8,300	8,800	8,803	9,000	8,210	8,408	9,010	9,660
NPCC—Canada	171	593	593	593	593	593	593	593	593	593	593
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	48,649	54,935	58,923	62,760	67,540	73,803	82,689	89,032	102,311	120,113	126,266

Subregional: Estimated Fossil Fuel Requirements — Coal

WESTERN LIGNITE — STEAM

1000 Tons

TABLE 23S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[c]	171	593	593	593	593	593	593	593	593	593	593
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	171	593	593	593	593	593	593	593	593	593	593
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern[e]	0	0	0	0	0	0	0	0	0	740	1,479
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	740	1,479
Group A	0	0	0	0	0	953	2,941	3,085	3,257	8,344	8,707
Group B	0	0	0	0	2,271	3,914	4,421	4,514	4,547	4,547	4,547
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	2,271	4,867	7,362	7,599	7,804	12,891	13,254
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	0	0	0	0	0	0	0	0	0
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0

Regional: Estimated Fossil Fuel Requirements — Coal

WESTERN COAL[b] — STEAM — 1000 Tons — TABLE 23

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR[a]	–	–	–	–	–	–	–	–	–	–	–
ERCOT	14,752	15,763	17,143	17,664	17,272	18,504	18,964	19,462	18,190	18,325	23,003
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	24,091	24,473	24,144	21,540	20,589	19,863	19,757	18,848	21,334	23,789	23,853
MAPP — U.S.	27,627	27,039	28,442	29,722	31,196	32,977	34,388	35,101	36,076	37,241	39,706
NPCC — U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	1,387	1,630	1,650	1,640	1,620	1,580	1,600	1,600	1,600	1,600	1,600
SPP	42,359	49,412	58,073	61,304	65,160	65,782	67,332	71,388	74,948	79,838	86,905
WSCC — U.S.	69,138	76,851	79,363	79,839	82,735	86,347	90,518	97,688	105,042	113,134	120,813
NERC — U.S.	179,354	195,168	208,815	211,709	218,572	225,053	232,559	244,087	257,190	273,927	295,880
MAPP — Canada	117	160	103	111	0	0	0	0	0	0	0
NPCC — Canada	2,205	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071
WSCC — Canada	12,163	14,330	16,047	17,681	19,794	22,530	24,245	25,167	27,115	30,032	32,481
NERC — Total	193,839	211,729	227,036	231,572	240,437	249,654	258,875	271,325	286,376	306,030	330,432

Subregional: Estimated Fossil Fuel Requirements — Coal

WESTERN COAL[b] — STEAM — 1000 Tons — TABLE 23S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC — U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario[d]	2,205	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC — Canada	2,205	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071	2,071
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	1,387	1,630	1,650	1,640	1,620	1,580	1,600	1,600	1,600	1,600	1,600
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	1,387	1,630	1,650	1,640	1,620	1,580	1,600	1,600	1,600	1,600	1,600
Group A	8,088	9,812	13,622	14,054	16,740	16,573	16,790	19,103	19,975	20,668	23,729
Group B	16,109	21,891	23,897	25,635	26,370	27,091	27,317	28,159	30,425	33,513	36,820
Group C	18,162	17,709	20,554	21,615	22,050	22,118	23,225	24,126	24,548	25,657	26,356
SPP	42,359	49,412	58,073	61,304	65,160	65,782	67,332	71,388	74,948	79,838	86,905
NWPP — U.S.	26,674	30,933	33,002	34,638	36,801	39,058	40,208	43,210	45,876	47,361	49,495
RMPA	12,849	14,680	16,025	17,396	18,723	19,738	21,273	22,343	24,417	25,550	27,180
AZ-NM	19,684	19,424	18,478	15,873	16,315	16,000	16,273	17,680	18,140	19,681	21,297
CA-NV	9,931	11,814	11,858	11,932	10,896	11,551	12,764	14,455	16,609	20,542	22,841
WSCC — U.S.	69,138	76,851	79,363	79,839	82,735	86,347	90,518	97,688	105,042	113,134	120,813

Regional: Estimated Fossil Fuel Requirements — Coal

1000 Tons

TABLE 23

OTHER COAL — STEAM

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR[a]	–	–	–	–	–	–	–	–	–	–	–
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	34,364	37,405	36,901	39,219	39,745	39,912	38,661	38,709	39,323	39,908	41,858
MAIN	32,682	35,416	35,200	34,621	35,778	35,584	37,996	38,030	38,217	37,608	38,439
MAPP—U.S.	2,728	2,559	3,488	3,623	3,676	3,718	3,865	3,930	3,805	3,972	4,019
NPCC—U.S.	10,283	13,060	16,140	15,940	19,520	22,410	23,960	25,810	26,910	28,410	29,500
SERC	121,172	119,970	123,032	120,781	129,035	130,369	133,591	135,589	140,439	143,722	146,703
SPP	4,106	4,675	5,343	5,429	5,449	5,449	6,273	6,288	6,281	6,460	6,484
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
NERC—U.S.	205,535	213,885	220,104	219,613	233,203	237,442	244,346	248,356	254,975	260,080	267,003
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	9,586	12,057	11,971	7,916	9,143	6,895	8,682	7,318	6,779	4,875	5,033
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	215,121	225,942	232,075	227,529	242,346	244,337	253,028	255,674	261,754	264,955	272,036

Subregional: Estimated Fossil Fuel Requirements — Coal

1000 Tons

TABLE 23S

OTHER COAL — STEAM

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	8,542	9,650	11,090	10,310	12,720	14,030	15,300	17,150	18,100	18,700	19,790
New England	1,741	4,210	5,050	5,630	6,800	8,380	8,660	8,660	8,810	9,710	9,710
NPCC—U.S.	10,283	13,860	16,140	15,940	19,520	22,410	23,960	25,810	26,910	28,410	29,500
New Brunswick	337	267	319	337	331	363	399	346	551	552	535
Ontario	9,249	11,790	11,652	7,579	8,812	6,532	8,283	6,972	6,228	4,323	4,498
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	9,586	12,057	11,971	7,916	9,143	6,895	8,682	7,318	6,779	4,875	5,033
Florida	6,336	7,651	9,859	10,891	13,550	15,970	17,781	19,673	22,060	23,291	24,600
Southern	40,243	39,406	41,310	40,015	45,924	45,557	46,039	47,034	47,612	49,322	50,990
TVA	34,688	32,778	33,569	31,595	31,062	30,808	28,953	27,460	27,935	26,529	24,557
VACAR	39,905	40,135	38,294	38,280	38,499	38,034	40,818	41,422	42,832	44,580	46,556
SERC	121,172	119,970	123,032	120,781	129,035	130,369	133,591	135,589	140,439	143,722	146,703
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	650	650	650	650	650
Group C	4,106	4,675	5,343	5,429	5,449	5,449	5,623	5,638	5,631	5,810	5,834
SPP	4,106	4,675	5,343	5,429	5,449	5,449	6,273	6,288	6,281	6,460	6,484
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	0	0	0	0	0	0	0	0	0
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0

Regional: Estimated Fossil Fuel Requirements — Coal

1000 Tons

TABLE 23

TOTAL COAL — STEAM

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	153,436	156,654	162,802	162,660	162,378	167,127	168,665	172,189	176,097	178,816	184,068
ERCOT	43,429	45,581	48,466	50,350	50,244	53,748	59,901	65,918	75,710	86,365	94,529
MAAC	34,564	37,405	36,901	39,219	39,745	39,912	38,661	38,709	39,323	39,988	41,858
MAIN	56,773	59,889	59,344	56,161	56,367	55,447	57,753	56,878	59,551	61,397	62,292
MAPP—U.S.	44,476	47,072	50,937	54,526	57,776	60,994	63,050	65,205	67,875	70,052	73,479
NPCC—U.S.	10,283	13,860	16,140	15,940	19,520	22,410	23,960	25,810	26,910	28,410	29,300
SERC	122,559	121,600	124,682	122,421	130,655	131,949	135,191	137,189	142,039	146,062	149,782
SPP	46,465	54,087	63,416	66,733	72,880	76,098	80,967	85,275	89,033	99,189	106,643
WSCC—U.S.	69,138	76,851	79,363	79,839	82,735	86,347	90,518	97,688	105,042	113,134	120,813
NERC—U.S.	581,123	612,999	642,051	647,857	672,300	694,032	718,666	744,861	781,580	823,333	862,964
MAPP—Canada	5,997	7,210	8,103	8,411	8,800	8,808	9,000	8,210	8,488	9,010	9,660
NPCC—Canada	11,962	14,721	14,635	10,580	11,807	9,559	11,346	9,982	9,443	7,539	7,697
WSCC—Canada	12,163	14,330	16,047	17,681	19,794	22,530	24,245	25,167	27,115	30,032	32,481
NERC—Total	611,245	649,260	680,836	684,529	712,701	734,921	763,257	788,220	826,930	869,914	912,802

Subregional: Estimated Fossil Fuel Requirements — Coal

1000 Tons

TABLE 23S

TOTAL COAL — STEAM

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	8,542	9,650	11,090	10,310	12,720	14,030	15,300	17,150	18,100	18,700	19,790
New England	1,741	4,210	5,050	5,630	6,800	8,380	8,660	8,660	8,810	9,710	9,710
NPCC—U.S.	10,283	13,860	16,140	15,940	19,520	22,410	23,960	25,810	26,910	28,410	29,500
New Brunswick	337	267	319	337	331	363	399	346	551	552	535
Ontario	11,625	14,454	14,316	10,243	11,476	9,196	10,947	9,636	8,892	6,987	7,162
Québec	0	0	0	0	0	0	0	0	A	0	0
NPCC—Canada	11,962	14,721	14,635	10,580	11,807	9,559	11,346	9,982	9,443	7,539	7,697
Florida	6,336	7,651	9,859	10,091	13,550	15,970	17,701	19,673	22,060	23,291	24,600
Southern	41,630	41,036	42,960	41,655	47,544	47,137	47,639	48,634	49,212	51,662	54,869
TVA	34,688	32,778	33,569	31,595	31,062	30,808	28,953	27,460	27,935	26,529	24,557
VACAR	39,905	40,135	38,294	38,280	38,499	38,034	40,810	41,422	42,832	44,588	46,556
SERC	122,559	121,600	124,682	122,421	130,655	131,949	135,191	137,189	142,039	146,062	149,782
Group A	8,088	9,812	13,622	14,054	16,740	17,526	19,731	22,188	23,232	29,012	32,436
Group B	16,109	21,891	23,897	25,635	28,641	31,005	32,388	33,323	35,622	38,710	42,817
Group C	22,268	22,384	25,897	27,044	27,499	27,567	28,848	29,764	30,179	31,467	32,190
SPP	46,465	54,087	63,416	66,733	72,880	76,098	80,967	85,275	89,033	99,189	106,643
NWPP—U.S.	26,674	30,933	33,002	34,638	36,801	39,058	40,200	43,210	45,876	47,351	49,493
RMPA	12,849	14,680	16,025	17,396	18,723	19,738	21,273	22,343	24,417	25,550	27,188
AZ-NM	19,684	19,424	18,478	15,873	16,315	16,000	16,273	17,680	18,140	19,681	21,297
CA-NV	9,931	11,814	11,858	11,932	10,896	11,551	12,764	14,455	16,609	20,342	22,841
WSCC—U.S.	69,138	76,851	79,363	79,839	82,735	86,347	90,518	97,688	105,042	113,134	120,813

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

DISTILLATE OIL[1] — STEAM

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	605	964	752	665	665	665	665	665	665	665	567
ERCOT	426	660	1,199	1,020	1,298	672	958	3,239	2,532	1,193	3,264
MAAC	1,068	400	431	440	455	439	448	475	506	469	551
MAIN	815	775	884	743	606	630	779	761	801	681	812
MAPP — U.S.	289	264	277	286	295	307	300	289	290	291	320
NPCC — U.S.	143	170	170	170	170	170	170	170	170	170	170
SERC	1,950	2,368	2,643	2,614	2,820	2,880	2,841	2,881	3,022	3,051	3,069
SPP	1,519	675	769	873	653	1,665	2,648	2,570	3,071	2,033	2,418
WSCC — U.S.	25	2	2	4	4	4	4	4	4	10	9
NERC — U.S.	6,840	6,278	7,127	6,815	6,966	7,432	8,813	11,054	11,061	8,563	11,180
MAPP — Canada	122	61	62	62	62	62	62	91	119	119	119
NPCC — Canada	2	4	12	12	12	12	17	30	81	106	72
WSCC — Canada	0	0	0	0	0	0	0	0	0	0	0
NERC — Total	6,964	6,343	7,201	6,889	7,040	7,506	8,892	11,183	11,261	8,788	11,371

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

DISTILLATE OIL[1] — STEAM

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	143	170	170	170	170	170	170	170	170	170	170
NPCC — U.S.	143	170	170	170	170	170	170	170	170	170	170
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	2	4	12	12	12	12	17	30	81	106	72
NPCC — Canada	2	4	12	12	12	12	17	30	81	106	72
Florida	51	30	120	133	167	142	148	174	132	125	161
Southern	404	633	722	738	801	862	922	912	1,050	1,035	968
TVA	301	312	320	301	296	293	276	262	266	253	234
VACAR	1,194	1,385	1,481	1,442	1,556	1,583	1,495	1,533	1,574	1,638	1,7[illegible]
SERC	1,950	2,368	2,643	2,614	2,820	2,880	2,841	2,881	3,022	3,051	3,0[illegible]
Group A	1,354	199	292	311	72	1,059	2,015	1,932	2,166	1,205	1,600
Group B	41	362	352	352	371	380	380	380	621	531	510
Group C	124	114	125	210	210	226	253	258	284	297	308
SPP	1,519	675	769	873	653	1,665	2,648	2,570	3,071	2,033	2,418
NWPP — U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	2	2	4	4	4	4	4	4	2	2
AZ-NM	25	0	0	0	0	0	0	0	0	8	7
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC — U.S.	25	2	2	4	4	4	4	4	4	10	9

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

DISTILLATE OIL[1] — COMBUSTION TURBINE[2]

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	2,372	2,924	2,924	2,924	2,924	2,924	2,924	2,924	2,924	2,924	2,960
ERCOT	23	21	0	0	0	0	0	0	0	0	0
MAAC	2,193	907	869	516	466	672	643	499	710	721	734
MAIN	180	565	541	615	415	441	677	871	1,300	1,626	2,192
MAPP—U.S.	46	1,145	115	334	627	649	782	757	860	1,092	1,001
NPCC—U.S.	927	970	770	798	1,010	820	840	820	650	850	798
SERC	3,108	4,150	3,313	2,398	2,111	2,238	2,637	2,441	2,967	4,398	4,368
SPP	229	307	251	581	381	833	667	2,014	2,767	2,878	3,163
WSCC—U.S.	647	821	1,958	1,032	2,058	913	919	718	781	881	631
NERC—U.S.	9,727	11,418	9,941	8,702	9,384	9,098	9,689	10,644	13,959	15,098	15,629
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	158	298	318	342	373	297	317	300	328	941	527
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	9,885	11,788	10,259	9,044	9,957	9,387	10,006	10,944	13,887	16,031	16,166

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

DISTILLATE OIL[1] — COMBUSTION TURBINE[2]

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	691	720	920	960	700	998	610	998	420	620	960
New England	246	250	250	230	230	230	230	230	230	230	230
NPCC—U.S.	927	970	770	798	1,010	820	840	820	650	850	798
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	20	23	30	33	39	41	43	7	9	3	2
Québec	138	267	288	309	334	256	274	293	323	938	525
NPCC—Canada	158	298	318	342	373	297	317	300	328	941	527
Florida	1,972	1,039	630	789	570	468	674	686	1,082	2,327	2,147
Southern	234	262	588	370	516	917	917	976	914	947	927
TVA	150	2,128	1,385	998	230	103	138	94	102	78	38
VACAR	652	721	798	641	795	670	916	785	1,069	1,246	1,439
SERC	3,108	4,150	3,313	2,398	2,111	2,238	2,637	2,441	2,967	4,598	4,368
Group A	24	0	0	2	1	151	113	132	162	214	269
Group B	88	24	24	24	24	38	38	1,838	1,798	1,798	1,798
Group C	118	283	227	474	356	644	514	844	817	876	1,196
SPP	229	307	251	581	381	833	667	2,014	2,767	2,878	3,163
NWPP—U.S.	9	0	968	428	428	0	0	0	0	0	0
RMPA	3	7	12	15	15	15	15	15	15	15	15
AZ-NM	2	295	213	139	425	445	496	252	214	334	166
CA-NV	637	539	765	457	1,102	453	448	451	452	452	436
WSCC—U.S.	647	821	1,958	1,032	2,058	913	919	718	781	881	631

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

DISTILLATE OIL[1] — COMBINED CYCLE

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252	1,252
ERCOT	4	35	3	3	3	3	3	3	3	3	3
MAAC	186	99	74	21	11	13	4	5	7	6	5
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	1	120	1	14	28	38	40	40	40	40	40
NPCC—U.S.	130	700	700	610	610	440	440	440	440	270	270
SERC	72	9	9	10	11	0	0	0	0	0	0
SPP	47	0	386	389	394	419	414	406	415	524	494
WSCC—U.S.	7	401	315	268	503	369	354	224	254	1,590	1,295
NERC—U.S.	1,707	2,764	2,820	2,567	2,812	2,534	2,507	2,378	2,411	3,685	3,359
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,707	2,764	2,820	2,567	2,812	2,534	2,507	2,378	2,411	3,685	3,359

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

DISTILLATE OIL[1] — COMBINED CYCLE

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	130	700	700	610	610	440	440	440	440	270	270
NPCC—U.S.	130	700	700	610	610	440	440	440	440	270	270
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	72	9	9	10	11	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	72	9	9	10	11	0	0	0	0	0	0
Group A	47	0	386	389	392	396	403	391	395	424	394
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	2	23	11	15	20	100	100
SPP	47	0	386	389	394	419	414	406	415	524	494
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	7	377	287	238	473	339	324	196	227	1,563	1,274
CA-NV	0	24	28	30	30	30	30	28	27	27	21
WSCC—U.S.	7	401	315	268	503	369	354	224	254	1,590	1,295

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TOTAL DISTILLATE OIL — TABLE 24

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	4,229	4,740	4,528	4,441	4,441	4,441	4,441	4,441	4,441	4,441	4,379
ERCOT	453	716	1,202	1,023	1,301	675	961	3,242	2,535	1,196	3,267
MAAC	3,449	1,406	1,374	977	932	1,124	1,095	979	1,223	1,196	1,290
MAIN	995	1,340	1,425	1,358	1,021	1,071	1,456	1,632	2,101	2,307	3,004
MAPP—U.S.	336	1,537	393	634	950	994	1,122	1,086	1,190	1,423	1,361
NPCC—U.S.	1,208	1,920	1,720	1,570	1,790	1,430	1,450	1,430	1,260	1,290	1,230
SERC	5,130	6,527	5,965	5,014	4,942	5,118	5,478	5,322	6,989	7,649	7,637
SPP	1,795	982	1,406	1,763	1,428	2,917	3,729	4,990	6,253	5,435	6,075
WSCC—U.S.	679	1,224	1,875	1,304	2,557	1,286	1,277	946	1,039	2,401	1,935
NERC—U.S.	18,274	20,392	19,888	18,084	19,362	19,456	21,009	24,068	27,031	27,338	30,178
MAPP—Canada	122	61	62	62	62	62	62	91	119	119	119
NPCC—Canada	160	294	330	354	385	309	334	338	409	1,047	599
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	18,556	20,747	20,280	18,500	19,809	19,427	21,405	24,497	27,559	28,504	30,896

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TOTAL DISTILLATE OIL — TABLE 24S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	681	720	520	560	780	590	610	590	420	620	560
New England	527	1,200	1,200	1,010	1,010	840	840	840	840	670	670
NPCC—U.S.	1,208	1,920	1,720	1,570	1,790	1,430	1,450	1,430	1,260	1,290	1,230
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	20	23	30	33	39	41	43	7	5	3	2
Quebec	140	271	300	321	346	268	291	331	404	1,044	597
NPCC—Canada	160	294	330	354	385	309	334	338	409	1,047	599
Florida	1,995	1,086	759	932	748	610	822	860	2,014	2,452	2,328
Southern	638	895	1,222	1,108	1,317	1,779	1,839	1,788	1,964	1,982	1,895
TVA	451	2,440	1,705	891	526	476	406	356	368	331	269
VACAR	2,046	2,106	2,279	2,083	2,351	2,253	2,411	2,318	2,643	2,884	3,145
SERC	5,130	6,527	5,965	5,014	4,942	5,118	5,478	5,322	6,989	7,649	7,637
Group A	1,435	199	670	703	465	1,606	2,333	2,455	2,723	1,843	2,263
Group B	126	386	376	376	395	418	418	1,418	2,409	2,319	2,298
Group C	234	397	352	684	568	893	778	1,117	1,121	1,273	1,514
SPP	1,795	982	1,406	1,763	1,428	2,917	3,729	4,990	6,253	5,435	6,075
NWPP—U.S.	5	0	568	425	428	0	0	0	0	0	0
RMPA	3	9	14	19	19	19	19	19	19	17	17
AZ-NM	34	632	500	373	898	784	780	448	541	1,905	1,447
CA-NV	637	583	793	487	1,212	483	478	479	479	479	471
WSCC—U.S.	679	1,224	1,875	1,304	2,557	1,286	1,277	946	1,039	2,401	1,935

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

RESIDUAL[h] OIL — STEAM

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	5,300	7,323	8,023	8,731	8,731	8,731	8,731	8,731	8,731	8,731	8,731
ERCOT	607	1,455	3,058	3,523	4,340	2,455	3,183	9,864	7,357	2,836	6,972
MAAC	38,701	34,912	27,998	17,919	17,938	21,392	16,122	14,304	18,064	18,225	16,780
MAIN	9,614	6,818	5,935	5,040	3,812	2,757	3,187	2,959	4,101	5,187	5,299
MAPP—U.S.	144	25	51	37	78	108	149	97	133	193	183
NPCC—U.S.	129,607	123,190	112,130	107,650	97,320	84,380	63,430	63,610	69,050	69,210	75,040
SERC	80,703	74,801	64,072	58,255	42,659	43,805	50,083	51,588	55,618	55,764	55,377
SPP	6,916	2,219	2,845	4,477	7,403	14,121	18,276	14,547	13,153	12,891	11,402
WSCC—U.S.	44,854	50,571	49,812	49,083	53,518	60,935	58,519	53,392	48,418	52,749	50,957
NERC—U.S.	316,446	301,314	273,924	254,715	235,799	238,684	223,680	219,092	223,625	225,786	232,741
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	5,943	2,421	2,376	2,420	2,716	2,926	3,219	5,931	10,185	10,218	7,279
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	322,389	303,735	276,300	257,135	238,515	241,610	226,899	225,023	233,810	236,004	240,020

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

RESIDUAL[h] OIL — STEAM

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	62,245	58,790	48,990	50,350	43,730	44,500	36,210	32,370	32,670	34,300	34,910
New England	67,362	64,400	63,140	57,300	53,590	39,880	27,220	31,240	35,380	34,910	40,130
NPCC—U.S.	129,607	123,190	112,130	107,650	97,320	84,380	63,430	63,610	68,050	69,210	75,040
New Brunswick	5,732	2,225	2,097	2,236	2,532	2,742	2,961	5,342	8,945	8,590	6,175
Ontario	149	130	95	0	0	0	0	0	0	0	0
Québec	62	66	184	184	184	184	258	589	1,240	1,628	1,104
NPCC—Canada	5,943	2,421	2,376	2,420	2,716	2,926	3,219	5,931	10,185	10,218	7,279
Florida	72,669	70,143	59,983	54,705	37,687	39,959	45,881	47,077	51,067	52,201	51,793
Southern	370	108	193	154	197	235	235	202	202	169	169
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	7,664	4,550	3,896	3,396	4,775	3,611	3,967	4,309	4,349	3,394	3,415
SERC	80,703	74,801	64,072	58,255	42,659	43,805	50,083	51,588	55,618	55,764	55,377
Group A	6,504	1,586	2,632	4,367	7,254	13,980	16,619	12,902	12,879	12,147	11,002
Group B	4	417	48	53	53	53	1,553	1,553	53	386	53
Group C	408	216	165	57	96	88	104	92	221	358	347
SPP	6,916	2,219	2,845	4,477	7,403	14,121	18,276	14,547	13,153	12,891	11,402
NWPP—U.S.	23	0	292	211	206	0	0	0	0	0	0
RMPA	9	56	90	30	30	30	30	26	26	34	167
AZ-NM	324	3,328	2,496	1,815	5,083	5,016	5,075	4,529	4,808	5,895	5,249
CA-NV	44,498	47,187	46,934	47,027	48,199	55,889	53,414	48,837	43,584	46,820	45,541
WSCC—U.S.	44,854	50,571	49,812	49,083	53,518	60,935	58,519	53,392	48,418	52,749	50,957

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

RESIDUAL[b] OIL — COMBUSTION TURBINE[g]

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	56	58	80	130	106	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	405	654	413	517	296	291	414	370	534	618	541
SPP	10	60	43	64	69	62	64	93	98	107	107
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
NERC—U.S.	471	772	536	711	471	353	478	463	632	725	648
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	56	56	59	64	69	72	77	82	88	94	101
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	527	828	595	775	540	425	555	545	720	819	749

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

RESIDUAL[b] OIL — COMBUSTION TURBINE[g]

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	56	56	59	64	69	72	77	82	88	94	101
NPCC—Canada	56	56	59	64	69	72	77	82	88	94	101
Florida	405	654	413	517	296	291	414	370	534	618	541
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	405	654	413	517	296	291	414	370	534	618	541
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	10	60	43	64	69	62	64	93	98	107	107
SPP	10	60	43	64	69	62	64	93	98	107	107
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	0	0	0	0	0	0	0	0	0
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	0	0	0	0	0	0	0	0	0	0	0

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

RESIDUAL[h] OIL — COMBINED CYCLE

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	441	440	440	440	440	440	440	440	440	440	440
SERC	1,043	1,127	0	0	0	0	0	0	3,224	3,360	3,383
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	40	0	0	0	0	0	0	0	0	0	0
NERC—U.S.	1,524	1,567	440	440	440	440	440	440	3,664	3,800	3,823
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	1,524	1,567	440	440	440	440	440	440	3,664	3,800	3,823

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

RESIDUAL[h] OIL — COMBINED CYCLE

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	441	440	440	440	440	440	440	440	440	440	440
NPCC—U.S.	441	440	440	440	440	440	440	440	440	440	440
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	1,043	1,127	0	0	0	0	0	0	3,224	3,360	3,383
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	1,043	1,127	0	0	0	0	0	0	3,224	3,360	3,383
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	40	0	0	0	0	0	0	0	0	0	0
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC—U.S.	40	0	0	0	0	0	0	0	0	0	0

Regional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24

TOTAL RESIDUAL[b] OIL

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	5,300	7,323	6,023	8,731	8,731	8,731	8,731	8,731	8,731	8,731	8,731
ERCOT	607	1,455	3,058	3,523	4,340	2,455	3,183	9,864	7,357	2,836	6,972
MAAC	38,701	34,912	27,998	17,919	17,938	21,392	18,122	14,304	18,864	18,225	19,780
MAIN	9,614	6,818	5,935	5,040	3,812	2,757	3,187	2,959	4,101	5,187	5,299
MAPP—U.S.	266	83	131	167	184	108	149	97	133	193	183
NPCC—U.S.	130,048	123,630	112,570	100,090	97,760	84,820	63,870	64,050	68,490	69,650	75,480
SERC	82,151	76,582	64,485	58,772	42,955	44,096	50,497	51,958	59,376	59,742	59,301
SPP	6,926	2,279	2,888	4,541	7,472	14,183	18,340	14,640	13,251	12,998	11,509
WSCC—U.S.	44,094	50,571	49,812	49,083	53,518	60,935	58,519	53,392	48,418	52,749	50,957
NERC—U.S.	318,441	303,653	274,900	255,866	236,710	239,477	224,598	219,995	227,921	230,311	237,212
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	5,999	2,477	2,435	2,484	2,785	2,998	3,296	6,013	10,273	10,312	7,380
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	324,440	306,130	277,335	258,350	239,495	242,475	227,894	226,008	238,194	240,623	244,592

Subregional: Estimated Fossil Fuel Requirements — Oil

1000 Barrels

TABLE 24S

TOTAL RESIDUAL[b] OIL

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	62,245	58,790	48,990	50,350	43,730	44,500	36,210	32,370	32,670	34,300	34,910
New England	67,803	64,840	63,580	57,740	54,030	40,320	27,660	31,680	35,820	35,350	40,570
NPCC—U.S.	130,048	123,630	112,570	108,090	97,760	84,820	63,870	64,050	68,490	69,650	75,480
New Brunswick	5,732	2,225	2,097	2,236	2,532	2,742	2,961	5,342	8,945	8,590	6,175
Ontario	149	130	95	0	0	0	0	0	0	0	0
Québec	118	122	243	248	253	256	335	671	1,328	1,722	1,205
NPCC—Canada	5,999	2,477	2,435	2,484	2,785	2,998	3,296	6,013	10,273	10,312	7,380
Florida	74,117	71,924	60,396	55,222	37,983	40,250	46,295	47,447	54,825	56,179	55,717
Southern	370	108	193	154	197	235	235	202	202	169	169
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	7,664	4,550	3,896	3,396	4,775	3,611	3,967	4,309	4,349	3,394	3,415
SERC	82,151	76,582	64,485	58,772	42,955	44,096	50,497	51,958	59,376	59,742	59,301
Group A	6,584	1,366	2,632	4,367	7,254	13,980	16,619	12,902	12,879	12,147	11,002
Group B	4	417	48	53	53	53	1,553	1,553	53	386	53
Group C	418	276	208	121	165	150	168	185	319	465	454
SPP	6,926	2,279	2,888	4,541	7,472	14,183	18,340	14,640	13,251	12,998	11,509
NWPP—U.S.	23	0	292	211	206	0	0	0	0	0	0
RMPA	9	56	90	30	30	30	30	26	26	34	167
AZ-NM	364	3,328	2,496	1,818	5,983	5,816	5,675	4,529	4,868	5,895	5,249
CA-NV	44,498	47,187	46,934	47,027	48,199	55,099	53,414	48,837	47,394	46,828	45,541
WSCC—U.S.	44,094	50,571	49,812	49,083	53,518	60,935	58,519	53,392	48,418	52,749	50,957

Regional: Estimated Fossil Fuel Requirements — Oil

TOTAL CRUDE OIL — STEAM

1000 Barrels

TABLE 24

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	0	0	0	0	0	0	0	0	0	0	0
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP — U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC — U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
WSCC — U.S.	0	0	0	0	0	0	0	0	0	0	0
NERC — U.S.	0	0	0	0	0	0	0	0	0	0	0
MAPP — Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC — Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC — Canada	0	0	0	0	0	0	0	0	0	0	0
NERC — Total	0	0	0	0	0	0	0	0	0	0	0

Subregional: Estimated Fossil Fuel Requirements — Oil

TOTAL CRUDE OIL — STEAM

1000 Barrels

TABLE 24S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC — U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC — Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0	0	0	0	0
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	0	0	0	0	0	0	0	0	0	0	0
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	0	0	0	0	0	0	0	0	0	0	0
NWPP — U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	0	0	0	0	0	0	0	0	0
CA-NV	0	0	0	0	0	0	0	0	0	0	0
WSCC — U.S.	0	0	0	0	0	0	0	0	0	0	0

Regional: Estimated Fossil Fuel Requirements — Oil

TOTAL OIL — 1000 Barrels — TABLE 24

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	9,529	12,063	12,551	13,172	13,172	13,172	13,172	13,172	13,172	13,172	13,110
ERCOT	1,060	2,171	4,260	4,546	5,641	3,130	4,144	13,106	9,892	4,032	10,239
MAAC	42,150	36,318	29,372	18,896	18,870	22,516	19,217	15,283	19,287	19,421	20,070
MAIN	10,609	8,158	7,360	6,398	4,833	3,828	4,643	4,391	6,202	7,494	8,303
MAPP—U.S.	536	1,620	524	801	1,134	1,102	1,271	1,183	1,323	1,616	1,544
NPCC—U.S.	131,256	125,550	114,290	109,660	99,550	86,250	65,320	65,480	69,750	70,940	76,710
SERC	87,281	83,109	70,450	63,786	47,897	49,214	55,975	57,280	66,365	67,391	66,938
SPP	8,721	3,261	4,294	6,304	8,900	17,100	22,069	19,630	19,504	18,433	17,584
WSCC—U.S.	45,573	51,795	51,687	50,387	56,075	62,221	59,796	54,338	49,457	55,150	52,892
NERC—U.S.	336,715	324,045	294,788	273,950	256,072	258,533	245,607	244,063	254,952	257,649	267,390
MAPP—Canada	122	61	62	62	62	62	62	91	119	119	119
NPCC—Canada	6,159	2,771	2,765	2,838	3,170	3,307	3,630	6,351	10,682	11,359	7,979
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	342,996	326,877	297,615	276,850	259,304	261,902	249,299	250,505	265,753	269,127	275,488

Subregional: Estimated Fossil Fuel Requirements — Oil

TOTAL OIL — 1000 Barrels — TABLE 24S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	62,926	59,510	49,510	50,910	44,510	45,090	36,820	32,960	33,090	34,920	35,470
New England	68,330	66,040	64,780	58,750	55,040	41,160	28,500	32,520	36,660	36,020	41,240
NPCC—U.S.	131,256	125,550	114,290	109,660	99,550	86,250	65,320	65,480	69,750	70,940	76,710
New Brunswick	5,732	2,225	2,097	2,236	2,532	2,742	2,961	5,342	8,945	8,590	6,175
Ontario	169	153	125	33	35	41	43	7	5	3	2
Québec	258	393	543	569	599	524	626	1,002	1,732	2,766	1,802
NPCC—Canada	6,159	2,771	2,765	2,838	3,170	3,307	3,630	6,351	10,682	11,359	7,979
Florida	76,112	73,010	61,155	56,154	38,731	40,860	47,117	48,307	56,839	58,631	58,045
Southern	1,008	1,003	1,415	1,262	1,514	2,014	2,074	1,990	2,166	2,151	2,064
TVA	451	2,440	1,705	891	526	476	406	356	368	331	269
VACAR	9,710	6,656	6,175	5,479	7,126	5,864	6,378	6,627	6,992	6,278	6,560
SERC	87,281	83,109	70,450	63,786	47,897	49,214	55,975	57,280	66,365	67,391	66,938
Group A	7,939	1,785	3,310	5,070	7,719	15,586	19,152	15,357	15,602	13,990	13,265
Group B	130	803	424	429	448	471	1,971	2,971	2,462	2,705	2,351
Group C	652	673	360	805	733	1,043	946	1,302	1,440	1,738	1,968
SPP	8,721	3,261	4,294	6,304	8,900	17,100	22,069	19,630	19,504	18,433	17,584
NWPP—U.S.	28	0	860	636	634	0	0	0	0	0	0
RMPA	12	65	104	49	49	49	49	45	45	51	184
AZ-NM	398	3,960	2,996	2,188	5,981	5,800	5,855	4,977	5,349	7,800	6,696
CA-NV	45,135	47,770	47,727	47,514	49,411	56,372	53,892	49,316	44,063	47,299	46,012
WSCC—U.S.	45,573	51,795	51,687	50,387	56,075	62,221	59,796	54,338	49,457	55,150	52,892

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

FIRM NATURAL GAS — STEAM

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	823,034	856,209	877,201	900,437	957,527	953,713	917,091	876,777	845,048	855,863	804,735
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	4,967	502	502	502	578	578	655	655	732	732	809
MAPP—U.S.	347	353	334	334	334	334	333	332	333	333	333
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	3,943	3,152	2,788	2,583	2,656	3,578	4,459	2,498	1,591	834	225
SPP	709,266	622,440	580,925	553,158	483,888	494,721	469,720	446,141	446,748	434,640	436,632
WSCC—U.S.	358,314	323,506	232,155	171,821	148,455	112,071	116,148	133,580	134,810	118,922	121,080
NERC—U.S.	1,899,871	1,806,162	1,693,905	1,628,835	1,593,438	1,564,995	1,508,406	1,459,983	1,429,262	1,411,324	1,363,814
MAPP—Canada	5,500	2,200	2,000	1,900	2,400	2,400	5,200	3,800	3,800	3,100	2,500
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	30,180	26,715	27,880	30,797	30,104	21,861	16,391	16,895	18,774	23,436	29,295
NERC—Total	1,935,551	1,835,077	1,723,785	1,661,532	1,625,942	1,589,256	1,529,997	1,480,678	1,451,836	1,437,860	1,395,609

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

FIRM NATURAL GAS — STEAM

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	–	–	–	–	–	–	–	–	–	–	–
Southern	3,943	3,152	2,788	2,583	2,656	3,578	4,459	2,498	1,591	834	225
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	3,943	3,152	2,788	2,583	2,656	3,578	4,459	2,498	1,591	834	225
Group A	319,211	295,872	278,090	273,077	205,975	217,588	202,455	179,849	188,333	168,618	177,898
Group B	360,793	297,622	277,751	268,025	263,698	259,594	253,547	251,312	240,256	247,601	237,119
Group C	29,262	28,946	25,084	12,056	14,215	17,539	13,718	14,980	18,159	18,421	21,615
SPP	709,266	622,440	580,925	553,158	483,888	494,721	469,720	446,141	446,748	434,640	436,632
NWPP—U.S.	1,387	0	0	0	0	0	0	0	0	0	0
RMPA	7,621	4,097	5,911	4,515	5,935	6,662	6,486	6,574	5,490	6,296	4,060
AZ-NM	81,399	47,780	40,683	39,004	34,075	29,588	35,773	33,768	14,987	10,220	11,318
CA-NV	267,307	271,629	185,361	128,302	108,445	75,821	73,889	93,238	114,333	102,406	105,702
WSCC—U.S.	358,314	323,506	232,155	171,821	148,455	112,071	116,148	133,580	134,810	118,922	121,080

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

FIRM NATURAL GAS — COMBUSTION TURBINE

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	5,700	4,893	6,307	7,588	9,021	12,479	8,484	16,539	13,351	13,820	15,874
MAAC	5,771	0	0	0	0	0	0	0	0	0	0
MAIN	5,396	8,841	6,589	5,658	3,528	1,587	1,445	1,140	1,641	2,544	2,196
MAPP—U.S.	41	49	114	234	324	163	217	249	56	95	196
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	8	16	16	16	16	16	16	16	16	16	16
SPP	2,985	4,744	2,830	2,795	1,892	2,945	1,814	1,537	1,625	1,597	1,622
WSCC—U.S.	14,472	18,143	21,085	16,431	16,557	14,224	12,350	11,317	9,114	8,236	6,295
NERC—U.S.	34,373	36,686	36,941	32,722	31,338	31,414	24,326	30,798	25,803	26,308	26,199
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	8,413	7,332	7,423	7,487	7,550	7,466	7,413	7,445	7,466	7,466	7,476
NERC—Total	42,786	44,018	44,364	40,209	38,888	38,880	31,739	38,243	33,269	33,774	33,675

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

FIRM NATURAL GAS — COMBUSTION TURBINE

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	–	–	–	–	–	–	–	–	–	–	–
Southern	8	16	16	16	16	16	16	16	16	16	16
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	8	16	16	16	16	16	16	16	16	16	16
Group A	0	1,548	1,088	1,676	789	1,863	789	449	537	515	504
Group B	1,015	1,076	496	464	448	427	370	433	433	427	463
Group C	1,970	2,128	1,326	655	655	655	655	655	655	655	655
SPP	2,985	4,744	2,830	2,795	1,892	2,945	1,814	1,537	1,625	1,597	1,622
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	2,699	2,714	5,234	3,559	5,404	6,365	6,103	5,859	5,116	5,641	3,494
AZ-NM	5,272	6,712	4,657	4,645	2,995	2,321	2,844	3,395	1,664	246	148
CA-NV	6,501	8,717	11,194	8,227	8,158	5,538	3,403	2,063	2,334	2,349	2,653
WSCC—U.S.	14,472	18,143	21,085	16,431	16,557	14,224	12,350	11,317	9,114	8,236	6,295

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

FIRM NATURAL GAS — COMBINED CYCLE

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	44,113	32,263	31,270	30,174	30,182	32,261	30,111	31,475	27,937	28,460	28,732
MAAC	0	0	0	0	0	0	0	0	0	0	0
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
SPP	14,101	12,714	14,681	14,545	14,256	14,500	12,143	13,324	13,040	13,370	12,856
WSCC—U.S.	42,742	37,219	37,016	42,378	38,119	38,030	35,037	34,885	37,028	26,476	26,468
NERC—U.S.	100,956	82,196	82,967	87,097	82,557	84,791	77,291	79,684	78,013	68,306	68,056
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	100,956	82,196	82,967	87,097	82,557	84,791	77,291	79,684	78,013	68,306	68,056

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

FIRM NATURAL GAS — COMBINED CYCLE

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	–	–	–	–	–	–	–	–	–	–	–
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	0	0	0	0	0	0	0	0	0	0	0
Group B	14,101	12,714	14,681	14,545	14,256	14,500	12,143	13,324	13,040	13,370	12,856
Group C	0	0	0	0	0	0	0	0	0	0	0
SPP	14,101	12,714	14,681	14,545	14,256	14,500	12,143	13,324	13,040	13,370	12,856
NWPP—U.S.	0	0	0	0	0	0	0	0	0	0	0
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	14,820	14,774	14,649	16,668	12,409	12,320	9,327	9,175	11,318	766	758
CA-NV	27,922	22,445	22,367	25,710	25,710	25,710	25,710	25,710	25,710	25,710	25,710
WSCC—U.S.	42,742	37,219	37,016	42,378	38,119	38,030	35,037	34,885	37,028	26,476	26,468

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

TOTAL FIRM NATURAL GAS

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	872,947	693,365	914,778	930,199	996,730	998,453	955,686	924,791	886,336	898,143	849,341
MAAC	5,771	0	0	0	0	0	0	0	0	0	0
MAIN	10,363	9,343	7,091	6,160	4,106	2,165	2,100	1,795	2,373	3,276	3,005
MAPP—U.S.	388	402	448	568	658	497	550	581	389	428	529
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC	3,951	3,168	2,804	2,599	2,672	3,594	4,475	2,514	1,607	850	241
SPP	726,352	639,698	598,436	570,498	500,036	512,166	483,677	461,002	461,421	449,607	451,110
WSCC—U.S.	415,528	378,868	290,256	230,630	203,131	164,325	163,535	179,782	180,952	153,634	153,843
NERC—U.S.	2,035,200	1,925,044	1,813,813	1,748,654	1,707,333	1,681,200	1,610,023	1,570,465	1,533,078	1,505,938	1,458,069
MAPP—Canada	5,500	2,200	2,000	1,900	2,400	2,400	5,200	3,800	3,800	3,100	2,500
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	38,593	34,047	35,303	38,284	37,654	29,327	23,804	24,340	26,240	30,902	36,771
NERC—Total	2,079,293	1,961,291	1,851,116	1,788,838	1,747,387	1,712,927	1,639,027	1,598,605	1,563,118	1,539,940	1,497,340

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

TOTAL FIRM NATURAL GAS

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	–	–	–	–	–	–	–	–	–	–	–
Southern	3,951	3,168	2,804	2,599	2,672	3,594	4,475	2,514	1,607	850	241
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	3,951	3,168	2,804	2,599	2,672	3,594	4,475	2,514	1,607	850	241
Group A	319,211	297,412	279,098	274,753	206,764	219,451	203,244	180,298	186,878	169,133	178,402
Group B	375,909	311,412	292,928	283,034	278,402	274,521	266,060	265,069	253,737	261,398	250,438
Group C	31,232	31,074	26,410	12,711	14,870	18,194	14,373	15,635	18,814	19,076	22,270
SPP	726,352	639,898	598,436	570,498	500,036	512,166	483,677	461,002	461,421	449,607	451,110
NWPP—U.S.	1,387	0	0	0	0	0	0	0	0	0	0
RMPA	10,520	6,811	11,145	9,074	11,339	13,027	12,589	12,433	10,606	11,937	7,554
AZ-NM	101,691	69,266	59,989	60,317	49,479	44,229	47,944	46,338	27,969	11,232	12,224
CA-NV	301,730	302,791	219,122	162,239	142,313	107,069	103,002	121,011	142,377	130,465	134,065
WSCC—U.S.	415,528	378,868	290,256	230,630	203,131	164,325	163,535	179,782	180,952	153,634	153,843

Regional: Estimated Fossil Fuel Requirements — Natural Gas

INTERRUPTIBLE NATURAL GAS — STEAM — 1000 MCF — TABLE 25

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	1,715	1,221	249	248	248	248	248	248	248	249	248
ERCOT	173,454	208,608	224,996	215,698	197,184	187,223	191,186	169,925	172,214	153,881	150,676
MAAC	68,878	58,651	41,172	21,089	15,839	12,693	12,192	11,652	11,863	11,146	11,441
MAIN	4,684	4,228	3,463	2,849	423	525	545	540	611	633	38
MAPP—U.S.	4,487	1,347	565	780	697	1,226	1,486	1,233	580	950	776
NPCC—U.S.	141,943	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
SERC[1]	15,126	11,644	12,842	10,652	11,520	11,895	12,347	12,452	11,392	10,872	9,391
SPP	446,782	431,455	354,385	348,187	315,540	286,789	295,787	277,887	269,729	257,959	257,495
WSCC—U.S.	340,444	442,994	344,492	302,051	290,866	266,015	252,163	248,633	250,528	224,488	217,187
NERC—U.S.	1,205,796	1,257,375	1,066,550	943,668	868,284	776,777	772,294	721,770	717,157	659,297	646,632
MAPP—Canada	7,148	4,800	4,800	4,800	4,800	4,800	6,000	6,000	6,000	6,000	6,000
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	256	34,956	32,784	32,565	32,565	32,565	32,565	32,565	32,565	32,565	32,565
NERC—Total	1,213,192	1,297,031	1,103,934	981,033	905,649	814,142	810,879	760,335	755,742	697,862	685,237

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

INTERRUPTIBLE NATURAL GAS — STEAM — 1000 MCF — TABLE 25S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	132,872	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New England	9,071	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	141,943	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida[1]	-	-	-	-	-	-	-	-	-	-	-
Southern	12,497	8,409	9,197	8,489	9,094	9,754	9,754	9,754	9,754	9,548	8,554
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	2,629	3,235	3,645	1,963	2,434	2,141	2,593	2,698	1,638	1,324	837
SERC	15,126	11,644	12,842	10,652	11,520	11,895	12,347	12,452	11,392	10,872	9,391
Group A	356,052	340,793	272,635	275,864	240,310	222,573	234,318	210,038	201,521	197,635	191,616
Group B	52,898	52,404	53,646	34,546	49,425	46,495	44,431	48,214	47,008	41,992	46,476
Group C	37,833	38,258	28,104	17,697	16,805	17,721	17,038	18,733	21,200	18,432	19,403
SPP	446,782	431,455	354,385	348,107	315,540	286,789	295,787	277,887	269,729	257,959	257,495
NWPP—U.S.	2,328	0	1,725	3,341	3,293	1,238	676	699	694	694	694
RMPA	2,084	2,954	2,619	3,092	2,988	2,988	2,988	3,105	3,164	3,268	1,900
AZ-NM	4,161	3,460	3,398	0	0	0	0	0	0	0	0
CA-NV	329,871	436,580	336,767	296,618	284,585	261,669	248,499	244,829	246,662	220,526	214,393
WSCC—U.S.	340,444	442,994	344,492	303,051	290,866	266,015	252,163	248,633	250,528	224,488	217,187

Regional: Estimated Fossil Fuel Requirements — Natural Gas

INTERRUPTIBLE[a] NATURAL GAS — COMBUSTION TURBINE[g] 1000 MCF TABLE 25

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	8,491	8,538	8,538	8,538	8,538	8,538	8,538	8,538	8,538	8,538	8,538
ERCOT	41	0	0	0	0	0	0	0	0	0	0
MAAC	10,696	5,124	2,517	1,160	665	611	528	323	416	596	296
MAIN	1,017	1,331	819	661	590	463	498	442	671	936	59
MAPP—U.S.	2,641	361	315	312	316	316	342	343	363	392	423
NPCC—U.S.	671	0	0	0	0	0	0	0	0	0	0
SERC[i]	8,454	6,566	4,614	5,348	5,327	5,788	6,689	2,687	1,932	2,086	1,080
SPP	2,428	2,084	1,706	2,209	2,361	2,703	2,910	3,388	3,753	3,443	3,745
WSCC—U.S.	1,969	760	2,298	4,272	8,128	10,211	9,626	9,613	9,494	9,481	12,257
NERC—U.S.	36,408	24,764	20,807	22,500	25,925	28,630	29,131	25,334	25,167	25,472	26,398
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	36,408	24,764	20,807	22,500	25,925	28,630	29,131	25,334	25,167	25,472	26,398

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

INTERRUPTIBLE[a] NATURAL GAS — COMBUSTION TURBINE[g] 1000 MCF TABLE 25S

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	671	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	671	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida[i]	–	–	–	–	–	–	–	–	–	–	–
Southern	3,622	3,852	3,873	3,857	4,031	3,989	3,756	44	44	44	44
TVA[i]	1	–	–	–	–	–	–	–	–	–	–
VACAR	4,831	2,714	741	1,491	1,296	1,799	2,933	2,643	1,888	2,042	1,036
SERC	8,454	6,566	4,614	5,348	5,327	5,788	6,689	2,687	1,932	2,086	1,080
Group A	1,080	0	0	0	0	0	0	0	0	0	0
Group B	125	0	0	0	0	0	0	0	0	0	0
Group C	1,303	2,084	1,706	2,209	2,361	2,703	2,910	3,388	3,753	3,443	3,745
SPP	2,428	2,084	1,706	2,209	2,361	2,703	2,910	3,388	3,753	3,443	3,745
NWPP—U.S.	415	0	1,422	1,280	1,281	1,281	635	635	635	635	3,463
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	397	0	0	0	0	0	0	0	0	0	0
CA-NV	1,157	760	876	2,992	6,847	8,930	8,991	8,978	8,859	8,846	8,794
WSCC—U.S.	1,969	760	2,298	4,272	8,128	10,211	9,626	9,613	9,494	9,481	12,257

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

INTERRUPTIBLE[k] NATURAL GAS — COMBINED CYCLE

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	0	0	0	0	0	0	0	0	0	0	0
ERCOT	7,784	8,419	8,420	8,536	8,536	8,536	7,566	8,536	8,536	8,536	8,536
MAAC	4,768	5,157	3,032	1,078	556	649	398	232	362	317	262
MAIN	0	0	0	0	0	0	0	0	0	0	0
MAPP—U.S.	17	17	17	21	8	0	1	16	59	224	132
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
SERC[l]	0	0	0	0	0	0	0	0	0	0	0
SPP	36,677	19,334	11,057	7,102	6,517	7,751	9,136	10,703	11,259	12,708	14,144
WSCC—U.S.	2,087	6,604	16,009	16,731	16,712	9,150	6,804	5,827	5,708	5,190	3,370
NERC—U.S.	51,333	39,611	39,335	33,548	32,329	26,086	23,905	25,314	25,924	26,975	26,444
MAPP—Canada	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	0	0	0	0	0	0	0	0	0	0	0
NERC—Total	51,333	39,611	39,335	33,548	32,329	26,086	23,905	25,314	25,924	26,975	26,444

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

INTERRUPTIBLE[k] NATURAL GAS — COMBINED CYCLE

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	0	0	0	0	0	0	0	0	0	0	0
New England	0	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida[l]	-	-	-	-	-	-	-	-	-	-	-
Southern	0	0	0	0	0	0	0	0	0	0	0
TVA	0	0	0	0	0	0	0	0	0	0	0
VACAR	0	0	0	0	0	0	0	0	0	0	0
SERC	0	0	0	0	0	0	0	0	0	0	0
Group A	18,000	9,000	1,000	1,000	1,000	1,000	1,000	1,000	0	1,000	1,000
Group B	18,259	9,379	9,176	5,302	4,588	5,229	6,723	8,185	9,712	11,133	12,497
Group C	418	955	881	800	929	1,522	1,413	1,518	1,547	575	647
SPP	36,677	19,334	11,057	7,102	6,517	7,751	9,136	10,703	11,259	12,708	14,144
NWPP—U.S.	179	3,722	11,741	11,535	11,535	3,845	1,538	769	769	769	384
RMPA	0	0	0	0	0	0	0	0	0	0	0
AZ-NM	0	0	0	0	0	0	0	0	0	0	0
CA-NV	1,908	2,962	4,268	5,196	5,177	5,305	5,266	5,058	4,939	4,421	2,986
WSCC—U.S.	2,087	6,604	16,009	16,731	16,712	9,150	6,804	5,827	5,708	5,190	3,370

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

TOTAL INTERRUPTIBLE* NATURAL GAS

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	10,206	9,759	8,786	8,786	8,786	8,786	8,786	8,786	8,786	8,786	8,786
ERCOT	181,279	217,027	233,418	224,234	205,640	195,769	198,672	178,461	180,750	161,537	158,612
MAAC	84,334	60,932	47,521	23,327	16,259	13,953	13,118	12,207	12,641	12,059	11,999
MAIN	5,901	5,551	6,222	3,530	1,013	988	1,043	982	1,282	1,569	97
MAPP—U.S.	7,145	1,725	897	1,113	1,021	1,542	1,749	1,592	1,002	1,566	1,331
NPCC—U.S.	142,614	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
SERC[1]	23,580	18,210	17,456	16,000	16,855	17,683	19,036	15,139	13,324	12,958	10,471
SPP	485,688	452,873	367,148	357,498	324,418	297,243	307,833	291,178	284,741	274,110	275,384
WSCC—U.S.	352,500	450,438	362,799	324,054	315,706	285,376	268,593	264,073	265,722	239,159	232,814
NERC—U.S.	1,293,447	1,321,750	1,126,692	999,716	926,538	831,493	825,330	772,418	768,248	711,744	699,494
MAPP—Canada	7,140	4,800	4,800	4,800	4,800	4,800	6,000	6,000	6,000	6,000	6,000
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	256	34,856	32,584	32,585	32,585	32,585	32,585	32,585	32,585	32,585	32,585
NERC—Total	1,300,843	1,361,406	1,164,076	1,037,101	963,923	868,878	863,915	811,003	806,833	750,329	738,079

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

TOTAL INTERRUPTIBLE* NATURAL GAS

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	132,872	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New England	9,742	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	142,614	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida[1]	–	–	–	–	–	–	–	–	–	–	–
Southern	16,319	12,261	13,070	12,546	13,125	13,743	13,510	9,798	9,798	9,612	8,598
TVA[1]	1	–	–	–	–	–	–	–	–	–	–
VACAR	7,260	5,949	4,386	3,454	3,730	3,940	5,526	5,341	3,526	3,346	1,873
SERC	23,580	18,210	17,456	16,000	16,855	17,683	19,036	15,139	13,324	12,958	10,471
Group A	375,052	349,793	273,635	276,864	250,310	223,573	235,318	211,038	201,521	198,635	192,616
Group B	71,282	61,783	62,822	59,848	54,013	51,714	51,154	56,501	56,720	53,025	58,973
Group C	39,554	41,297	30,691	20,786	20,095	21,956	21,361	23,639	26,580	22,450	23,795
SPP	485,088	452,873	367,148	357,498	324,418	297,243	307,833	291,178	284,741	274,110	275,384
NWPP—U.S.	2,922	3,722	14,888	16,156	16,109	6,484	2,849	2,103	2,098	2,098	4,341
RMPA	2,084	2,954	2,610	3,092	2,988	2,988	2,988	3,105	3,164	3,268	1,900
AZ-NM	4,558	3,460	3,390	0	0	0	0	0	0	0	0
CA-NV	342,936	440,302	341,911	304,806	296,609	275,904	262,756	258,865	260,460	233,793	226,373
WSCC—U.S.	352,500	450,438	362,799	324,054	315,706	285,376	268,593	264,073	265,722	239,159	232,814

Regional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25

TOTAL NATURAL GAS

Region	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ECAR	10,206	9,759	8,786	8,786	8,786	8,786	8,786	8,786	8,786	8,786	8,786
ERCOT	1,054,126	1,110,392	1,148,196	1,162,433	1,202,370	1,194,222	1,154,358	1,103,252	1,067,086	1,059,680	1,007,953
MAAC	90,105	60,932	47,521	23,327	16,259	13,953	13,118	12,207	12,641	12,059	11,999
MAIN	16,264	14,894	13,313	9,690	5,119	3,153	3,143	2,777	3,655	4,845	3,102
MAPP—U.S.	7,533	2,127	1,345	1,681	1,679	2,039	2,299	2,173	1,391	1,994	1,860
NPCC—U.S.	142,614	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
SERC[1]	194,701	161,751	147,546	139,758	138,938	134,065	122,923	99,125	47,658	46,453	43,683
SPP	1,212,240	1,092,771	965,584	927,996	824,454	809,409	791,510	752,180	746,162	723,717	726,494
WSCC—U.S.	768,028	829,306	653,055	554,684	518,837	449,701	432,128	443,855	446,674	392,793	386,657
NERC—U.S.	3,495,817	3,387,167	3,067,791	2,869,529	2,753,282	2,625,481	2,534,765	2,424,355	2,334,053	2,250,327	2,190,534
MAPP—Canada	12,640	7,000	6,800	6,700	7,200	7,200	11,200	9,800	9,800	9,100	8,500
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
WSCC—Canada	38,849	68,903	67,887	70,869	70,239	61,912	56,389	56,925	58,825	63,407	69,356
NERC—Total	3,547,306	3,463,070	3,142,478	2,947,098	2,830,721	2,694,593	2,602,354	2,491,080	2,402,678	2,322,914	2,268,390

Subregional: Estimated Fossil Fuel Requirements — Natural Gas

1000 MCF

TABLE 25S

TOTAL NATURAL GAS

Subregion	ACTUAL 1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
New York	132,672	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New England	9,742	0	0	0	0	0	0	0	0	0	0
NPCC—U.S.	142,614	105,235	82,445	41,174	36,840	10,153	6,500	0	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0	0	0	0
Quebec	0	0	0	0	0	0	0	0	0	0	0
NPCC—Canada	0	0	0	0	0	0	0	0	0	0	0
Florida	167,170	140,373	127,286	121,159	119,411	112,788	99,412	81,472	32,727	32,645	32,971
Southern	20,270	15,429	15,874	15,145	15,797	17,337	17,985	12,312	11,405	10,462	8,839
TVA[1]	1	–	–	–	–	–	–	–	–	–	–
VACAR	7,260	5,949	4,386	3,454	3,730	3,940	5,526	5,341	3,526	3,346	1,873
SERC	194,701	161,751	147,546	139,758	138,938	134,065	122,923	99,125	47,658	46,453	43,683
Group A	694,263	647,205	552,733	551,617	457,074	443,024	438,562	391,336	390,391	367,768	371,018
Group B	447,191	373,195	355,750	342,682	332,415	326,235	317,214	321,570	310,457	314,423	309,411
Group C	70,786	72,371	57,101	33,497	34,965	40,150	35,734	39,274	45,314	41,526	46,065
SPP	1,212,240	1,092,771	965,584	927,996	824,454	809,409	791,510	752,180	746,162	723,717	726,494
NWPP—U.S.	4,589	3,722	14,888	16,156	16,109	6,484	2,849	2,103	2,098	2,098	4,541
RMPA	12,604	9,765	13,755	11,166	14,327	16,015	15,577	15,538	13,770	15,205	9,454
AZ-NM	106,249	72,726	63,379	60,317	49,479	44,229	47,944	46,338	27,969	11,232	12,224
CA-NV	644,666	743,093	561,033	467,045	438,922	382,973	365,758	379,876	402,837	364,258	360,438
WSCC—U.S.	768,028	829,306	653,055	554,684	518,837	449,701	432,128	443,855	446,674	392,793	386,657

Footnotes

a/ Coal sources indeterminate for ECAR.

b/ Coal mined west of the Mississippi River.

c/ Western Canadian Lignite expressed in U.S. coal heat equivalent.

d/ Western Canadian Sub-Bituminous Coal expressed in U.S. coal heat equivalent.

e/ Mississippi lignite.

f/ Distillate Oil includes #1 and #2 oil, kerosene and jet fuel.

g/ Includes diesel.

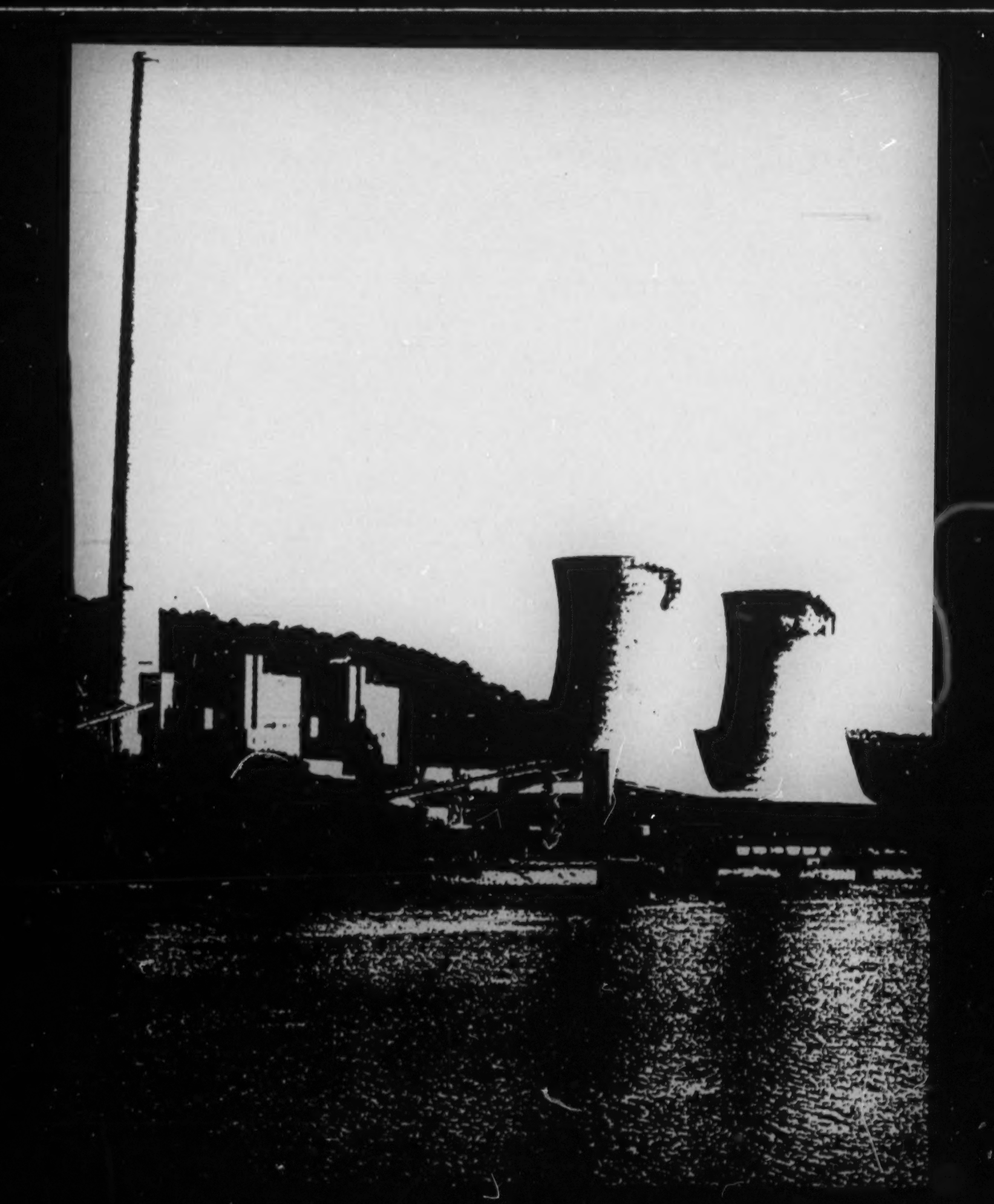
h/ Residual oil includes #4, #5, and #6 oil.

i/ Forida *firm* vs. *interruptible* gas status is indeterminate and is not included in SERC for these categories. Florida *total* natural gas is included in SERC total. TVA cannot make accurate estimates of future use and is not included in SERC gas data.

j/ *Firm* vs. *interruptible* gas status is indeterminate. Florida *total* natural gas is presented.

k/ Interruptible Natural Gas: by contractual agreement.

l/ Natural gas is used when available in 9.7% of TVA combustion turbine capacity. TVA does not have any firm long-term contracts, and thus cannot make accurate estimates of future use.



Planned Additions of Generating Units: All Units by Region

The generating unit additions planned for 1982-1991 are presented for the NERC Regions and Subregions in the following tables. These units are listed as reported by the Regional Reliability Councils of NERC to the U.S. Department of Energy in their April 1, 1982 (EP-411) Reports.

The principal fuel types of the new generating capacity planned to be brought into service in the next ten years are coal and nuclear. The following tables show that between 1982 and 1991, utilities are planning to add 174 new coal-fired units and 61 new nuclear units. Last year's projection for the 1981-1990 period was for 198 new coal-fired units and 76 new nuclear units. These reductions reflect the continuing delays in unit licensing and construction and the declining growth of peak demands expected by utilities.

A table listing only planned coal units, and a table listing only planned nuclear units, arranged chronologically by expected service date, are provided as Tables 27 and 28, respectively. A table listing only planned generating units by renewable energy sources is provided as Table 29.

The codes used throughout these tables for unit/fuel type and construction status are listed below. State locations of units are denoted by their two-character federal postal codes. Generating units which are jointly owned are denoted with a "J" in the far right-hand column. In such cases, only the name of the majority utility owner is listed, along with the total summer megawatt generating capability of the unit. Utility system abbreviations follow the conventions used in the regional EP-411 Reports.

Symbol Codes for the Following Regional Tables

Unit Type

ST	STEAM TURBINE-NON NUCLEAR
HB	STEAM-BWR NUCLEAR
HP	STEAM-PWR NUCLEAR
HH	STEAM-HTGR NUCLEAR
IC	INTERNAL COMBUSTION
GT	COMBUSTION TURBINE
HY	CONVENTIONAL HYDRO
PS	PUMPED STORAGE HYDRO
CW	COMBINED CYCLE-STEAM PORTION-WASTE HEAT ONLY
CA	COMBINED CYCLE-STEAM PORTION-AUXILIARY FIRED
CT	COMBINED CYCLE-COMBUSTION TURBINE PORTION
CG	COGENERATION
JE	JET ENGINE
FC	FUEL CELL
SO	SOLAR
WM	WIND POWER
GE	GEOTHERMAL
ZZ	NONE OF THE ABOVE
UH	UNKNOWN AT THIS TIME

Construction Status

P	PLANNED FOR INSTALLATION, BUT NOT UTILITY AUTHORIZED
L	REGULATORY APPROVAL PENDING
T	REGULATORY APPROVAL RECEIVED, BUT NOT UNDER CONSTRUCTION
U	UNDER CONSTRUCTION, LESS THAN APPROXIMATELY 50% OF PLANT COMPLETED
V	UNDER CONSTRUCTION, GREATER THAN APPROXIMATELY 50% OF PLANT COMPLETED

Fuel Type

WH	WASTE HEAT
COL	COAL - GENERAL
BIT	BITUMINOUS COAL
SUB	SUB-BITUMINOUS COAL
ANT	ANTHRACITE COAL
LIG	LIGNITE COAL
PC	PETROLEUM COKE
LNG	LIQUIFIED NATURAL GAS
MTH	METHANOL
GAS	GAS - GENERAL
NG	NATURAL GAS
RG	REFINERY GAS
BFG	BLAST FURNACE GAS
COG	COKE OVEN GAS
UNK	UNKNOWN AT THIS TIME
GST	GEOTHERMAL STEAM
MUL	MULTI-FUELED
REF	REFUSE - SOLID WASTE
OIL	OIL - GENERAL
FO1	NO.1 FUEL OIL
FO2	NO.2 FUEL OIL
FO4	NO.4 FUEL OIL
FO5	NO.5 FUEL OIL
FO6	NO.6 FUEL OIL
CRU	CRUDE OIL
TOP	TOP CRUDE OIL
JF	JET FUEL
KER	KEROSENE
LPG	LIQUID PROPANE GAS
RRO	RE-REFINED MOTOR OIL
SNG	SYNTHETIC NATURAL GAS
UR	URANIUM
PL	PLUTONIUM
WAT	WATER
TH	THORIUM
SUN	SUN
WND	WIND
G/C	GAS AND/OR COAL
O/C	OIL AND/OR COAL
W/G	WOOD AND/OR GAS
W/O	WOOD AND/OR OIL
WOO	WOOD
WD	WOOD AND WOOD WASTE
PEA	PEAT
ZZ	NONE OF THE ABOVE

ECAR

East Central Area Reliability Coordination Agreement
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
KY	LG&E	MILL CREEK 4	ST	495	COL	06/82	V	
IN	ME	MEROM 1	ST	460	COL	07/82	V	
IN	PSI	GIBSON 5	ST	620	COL	10/82	V	
OH	OP&L	KILLEN STATION 2	ST	600	COL	10/82	V	J
OH	AEP	RACINE	HY	49	WAT	10/82	V	
MI	ZBPW	UNIT 12	IC	6	NG	01/83	P	
OH	CG&E	ZIMMER 1	NB	792	UR	04/83	V	J
IN	HIPS	SCHAHFER 17	ST	344	COL	06/83	U	
MI	GHLP	UNIT 3	ST	58	COL	06/83	U	
MI	DECO	ENRICO FERMI 2	NB	1094	UR	11/83	V	J
MI	CP	MIDLAND 2	NP	783	UR	12/83	V	
OH	CAPC	PERRY 1	NB	1179	UR	05/84	V	J
MI	DECO	BELLE RIVER 1	ST	664	COL	07/84	U	
MI	CP	MIDLAND 1	NP	505	UR	07/84	V	
KY	BREC	WILSON 1	ST	395	COL	07/84	U	
KY	KU	GHENT 4	ST	500	COL	10/84	U	
IN	AEP	ROCKPORT 1	ST	1300	COL	12/84	U	
IN	SIGE	BROWN 2	ST	250	COL	01/85	U	
IN	HIPS	SCHAHFER 18	ST	344	COL	06/85	U	
KY	LG&E	TRIMBLE COUNTY 1	ST	495	COL	06/85	U	
MI	DECO	BELLE RIVER 2	ST	664	COL	07/85	U	
VA	APS	PUMPED STORAGE	PS	420	WAT	10/85	P	
IN	IP&L	PETERSBURG 4	ST	515	COL	04/86	U	
PA	CAPC	BEAVER VALLEY 2	NP	820	UR	05/86	V	J
VA	APS	PUMPED STORAGE	PS	420	WAT	10/86	P	
IN	PSI	MARBLE HILL 1	NP	1130	UR	12/86	U	J
IN	AEP	ROCKPORT 2	ST	1300	COL	12/86	U	
MI	LBWL	ERICKSON 3	ST	150	COL	03/87	P	
KY	EKPC	SMITH 1	ST	600	COL	10/87	U	
IN	PSI	MARBLE HILL 2	NP	1130	UR	12/87	U	J
KY	CG&E	EAST BEND 1	ST	600	COL	04/88	U	J
OH	CAPC	PERRY 2	NB	1179	UR	05/88	V	J
KY	KU	HANCOCK COUNTY 1	ST	650	COL	04/89	P	
PA	APS	LOWER ARMSTRONG 1	ST	630	COL	09/89	P	
IN	SIGE	BROWN 3	ST	500	COL	01/90	P	
IN	IP&L	PATRIOT 1	ST	650	COL	10/90	L	
KY	CG&E	EAST BEND 3	ST	600	COL	04/91	P	
KY	LG&E	UNDESIGNATED	GT	65	FO2	06/91	P	
PA	APS	LOWER ARMSTRONG 2	ST	630	COL	09/91	P	

ERCOT

Electric Reliability Council of Texas
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
TX	HOLP	PARISH 8	ST	540	COL	05/83	V	
TX	TMPP	GIBBONS CREEK 1	ST	480	LIG	06/83	V	
TX	HOLP	SOUTH TEXAS PROJECT 1	NP	1250	UR	04/84[a]	U	J
TX	TUCS	COMANCHE PEAK 1	NP	1150	UR	06/84	V	J
TX	TUCS	COMANCHE PEAK 2	NP	1150	UR	12/85	V	J
TX	HOLP	LIMESTONE 1	ST	700	LIG	04/86	U	
TX	HOLP	SOUTH TEXAS PROJECT 2	NP	1250	UR	04/86[b]	U	J
TX	WETU	OKLAUNION 1	ST	640[c]	COL	12/86	P	J
TX	HOLP	LIMESTONE 2	ST	700	LIG	04/87	U	
TX	TEPL	UNDETERMINED	UN	600	UNK	07/87	X[d]	
TX	TEPL	TWIN OAK 1	ST	562	LIG	02/88	U	
TX	HOLP	MALAKOFF 1	ST	600	LIG	04/88	P	
TX	LOCR	F.P.P. 3	ST	400	LIG	06/88	P	
TX	TEES	UNDETERMINED	UN	150	UNK	07/88	X[d]	
TX	TUCS	FOREST GROVE 1	ST	750	LIG	01/89	U	J
TX	HOLP	MALAKOFF 2	ST	600	LIG	04/89	P	
TX	TMPP	UNDESIGNATED	ST	480	LIG	06/89	P	
TX	TEPL	UNDETERMINED	UN	600	UNK	07/89	X[d]	
TX	TUCS	MARTIN LAKE 4	ST	750	LIG	01/90	U	J
TX	TUCS	UNASSIGNED	ST	750	LIG	01/90	P	J
TX	TEPL	TWIN OAK 2	ST	563	LIG	02/90	U	
TX	TUCS	UNASSIGNED	ST	650	COL	01/91	P	J
TX	SAAH	UNDESIGNATED	ST	500	LIG	04/91	P	
TX	HOLP	UNDETERMINED	ST	600	UNK	04/91	P	
TX	TMPP	UNDESIGNATED	ST	280	LIG	06/91	P	

a/ 1987 is now being assumed pending results of studies conducted by the Architect-Engineer.

b/ 1989 is now being assumed pending results of studies conducted by the Architect-Engineer.

c/ 175 MW of 640 MW Oklaunion capacity to participants in SPP Region.

d/ This additional capacity may be realized by rescheduling of units under construction or planned, by load reduction management and conservation, by deferral of unit retirements, and/or by capacity purchases.

MAAC

Mid-Atlantic Area Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
PA	PPL	SUSQUEHANNA 1	NB	1050	UR	05/83	V	J
PA	GPU	WARRIOR RIDGE	HY	1	WAT	05/83	T	
MD	BGE	BRANDON SHORES 1	ST	620	BIT	05/84	V	
PA	PPL	SUSQUEHANNA 2	NB	1050	UR	11/84	V	J
PA	PECO	LIMERICK 1	NB	1055	UR	04/85	V	
PA	BGE	SAFE HARBOR EXPANSION	HY	188	WAT	09/85	T	J
PA	GPU	RAYSTOWN	HY	1	WAT	05/86	L	
NJ	PSEG	HOPE CREEK 1	NB	1067	UR	12/86	U	J
PA	PECO	LIMERICK 2	NB	1055	UR	10/87	U	
MD	BGE	BRANDON SHORES 2	ST	620	BIT	01/88	U	
MD	DPL	VIENNA 9	ST	300	BIT	05/90	L	J
PA	GPU	COAL 1	ST	625	BIT	05/91	P	
NJ	ACE	CUMBERLAND 1	ST	290	BIT	10/91	L	

MAIN

Mid-America Interpool Network
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Commonwealth Edison Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
IL	CECO	LASALLE COUNTY 1	NB	1048	UR	06/82	V	
IL	CECO	LASALLE COUNTY 2	NB	1048	UR	10/83	V	
IL	ROCH	ROCHELLE, ILLINOIS 1	IC	6	NG	10/83	P	
IL	ROCH	ROCHELLE, ILLINOIS 2	IC	6	NG	10/83	P	
IL	CECO	BYRON 1	NP	1120	UR	02/84	V	
IL	CECO	BYRON 2	NP	1120	UR	02/85	V	
IL	VWWE	WINNETKA POWER PLANT	IC	5	NG	06/85	P	
IL	CECO	BRAIDWOOD 1	NP	1090	UR	10/85	V	
IL	CECO	BRAIDWOOD 2	NP	1090	UR	10/86	V	

Missouri Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MO	UHEC	CALLAWAY 1	NP	1120	UR	01/84	V	
MO	UHEC	UNDETERMINED	ST	575	COL	04/90	P	

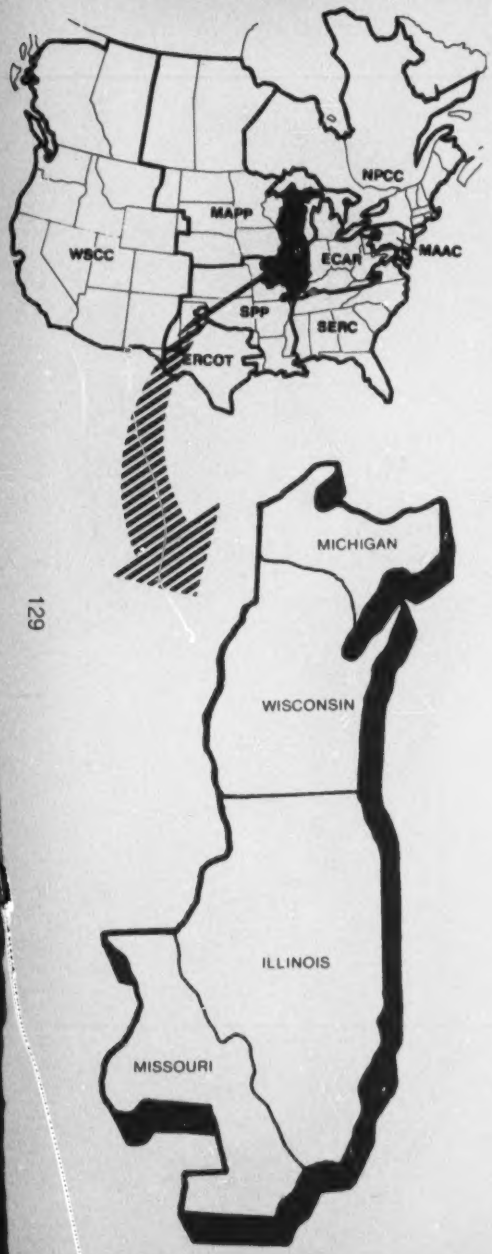
South Central Illinois Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
IL	CEIP	NEWTON 2	ST	565	COL	12/82	V	
IL	ILPC	CLINTON 1	NB	950	UR	08/83	V	J
IL	CEIL	DUCK CREEK 2	ST	400	COL	03/87	P	
IL	SYPC	SOYLAND 1	ST	450	COL	05/87	P	
IL	SPFI	UNKNOWN 1	GT	25	F02	06/89	P	
IL	SOIP	MARION UNIT 5	ST	350	COL	11/90	P	
IL	UEIL	UNDETERMINED	GT	24	F02	12/90	P	
IL	SPFI	UNKNOWN 2	GT	25	F02	06/91	P	

MAIN

Mid-America Interpool Network
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26



Wisconsin-Upper Michigan Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MI	MARQ	SHIRAS 3	ST	40	COL	10/82	U	
WI	WIEP	SMALL UNITS	UH	10	UN	01/83	P	
WI	WIPS	MERRILL	HY	1	WAT	12/83	L	
WI	WIEP	SMALL UNITS	UH	12	UN	01/84	P	
WI	WIEP	PLEASANT PRAIRIE 2	ST	500	SUB	10/84	U	
WI	WIEP	SMALL UNITS	UH	8	UN	01/85	P	
WI	WIPL	EDGEWATER 5	ST	380	SUB	03/85	U	J
MI	UPPP	CCI GAS TURBINE	JE	24	F02	05/85	P	
WI	WIPL	NEW CO-GEN. 1	UH	5	UN	12/85	P	
WI	WIPL	NEW HYDRO 1	HY	1	WAT	12/85	P	
WI	WIEP	SMALL UNITS	UH	10	UN	01/86	P	
WI	WIPS	COGENERATION PLANT	ST	10	COL	12/86	P	
WI	WIEP	SMALL UNITS	UH	10	UN	01/87	P	
WI	WIEP	SMALL UNITS	UH	10	UN	01/88	P	
WI	WIPL	NEW HYDRO 2	HY	1	WAT	12/88	P	
WI	MAGE	UNKNOWN	UH	1	UN	12/88	P	
WI	WIPL	NEW CO-GEN. 2	UH	5	UN	12/89	P	
WI	WIEP	SMALL UNITS	UH	1	UN	01/90	P	
WI	WIPS	HYDRO	HY	1	WAT	12/90	P	
WI	WIPS	WOOD PLANT	ST	10	WD	12/90	P	
WI	WIEP	NEW 400 MW PLANT	ST	400	COL	12/91	P	
WI	WIPL	NEW CO-GEN. 3	UH	5	UN	12/91	P	

MAPP

Mid-Continent Area Power Pool
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

MAPP-U.S.

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MN	MPL	PRAIRIE RIVER 1&2	HY	1	WAT	05/82	P	
WY	BEPC	LARAMIE RIVER 3	ST	550	SUB	11/82	V	J
IA	MPW	MUSCATINE 9	ST	150	BIT	11/82	V	
IA	IIGE	LOUISA 1	ST	650	SUB	07/83	V	J
WI	LSDP	LADYSMITH 3	HY	1	WAT	08/83	P	
ND	BEPC	ANTELOPE VALLEY 1	ST	416	LIG	11/83	V	
MN	MPL	BLANCHARD 3	HY	6	WAT	11/83	P	
NE	NPPD	KINGSLEY HYDRO 1	HY	38	WAT	05/85	U	
ND	BEPC	ANTELOPE VALLEY 2	ST	379	LIG	11/85	U	
MN	NSP	SHERBURNE CC 3	ST	800	SUB	05/86	L	J
MN	UPA	FUTURE GT 1988 01	GT	21	FO2	01/88	P	
WI	NSP	JIM FALLS 4	HY	1	WAT	05/88	L	
MN	NSP	METRO 1	ST	60	SUB	05/88	L	
WI	NSP	WISSOTA 7	HY	12	WAT	05/88	P	
WI	NSP	WISSOTA 8	HY	12	WAT	05/88	P	
ND	OTP	SPIRITWOOD 1	ST	125	LIG	09/88	T	
ND	BEPC	ANTELOPE VALLEY 3	ST	446	LIG	11/88	L	
IA	IELP	GUTHRIE COUNTY 1	ST	650	COL	12/88	P	J
MN	UPA	FUTURE GT 1989 01	GT	21	FO2	01/89	P	
WI	NSP	CHIPPEWA RESERVOIR 1	HY	2	WAT	05/90	L	
IA	IPS	NEAL 5	ST	400	SUB	05/90	P	J
MN	UPA	FUTURE GT 1991 01	GT	21	FO2	01/91	P	
MN	UPA	FUTURE GT 1991 02	GT	21	FO2	01/91	P	
NE	NPPD	FOSSIL 3	ST	600	SUB	05/91	L	
WI	NSP	WISCONSIN COAL 1	ST	670	SUB	05/91	P	J
MN	MPL	OLIVER COUNTY 1	ST	500	LIG	11/91	P	J

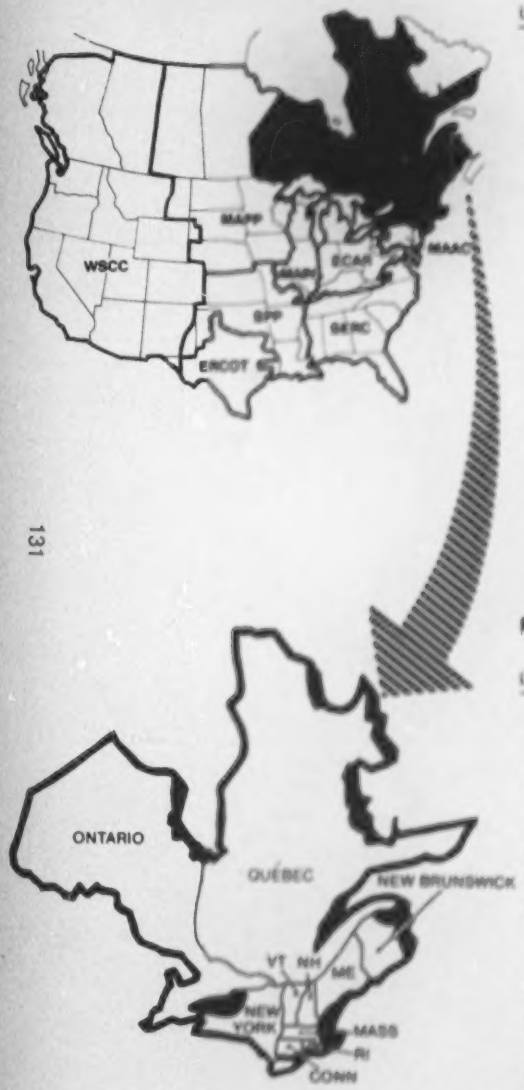
MAPP-Canada

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	SPC	POPLAR RIVER 1	ST	280	LIG	11/82	V	
	SPC	NIPAWIN 1	HY	84	WAT	10/85	U	
	SPC	NIPAWIN 2	HY	84	WAT	12/85	U	
	SPC	NIPAWIN 3	HY	84	WAT	03/86	U	
	SPC	FUTURE FOSSIL 1	ST	280	LIG	01/89	P	
	SPC	FUTURE FOSSIL 2	ST	280	LIG	01/90	P	

NPCC

Northeast Power Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26



New York Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
NY	POAS	PASNY NEW HYDRO	HY	5	WAT	08/82	L	
NY	LOIL	MITCHEL GARDENS 1 & 2	ST	32	REF	09/82	U	
NY	POAS	PASNY NEW HYDRO	HY	3	WAT	10/82	L	
NY	LOIL	SHOREHAM	NB	809	UR	03/83	V	
NY	NIMP	GRANBY	HY	10	WAT	05/83	P	
NY	POAS	PASNY NEW HYDRO	HY	2	WAT	11/83	P	
NY	CEHG	HIGH FALLS	HY	2	WAT	12/83	P	
NY	POAS	PASNY SOLID WASTE	ST	10	REF	05/84	P	
NY	NEYE	SOMERSET	ST	625	BIT	11/84	U	
NY	POAS	PASNY NEW HYDRO	HY	9	WAT	12/84	P	
NY	COEN	PEEKSKILL REFUSE	ST	51	REF	05/85	P	
NY	NIMP	UNION	HY	3	WAT	05/85	P	
NY	POAS	PASNY NEW HYDRO	HY	6	WAT	07/85	P	
NY	POAS	PASNY NEW HYDRO	HY	6	WAT	10/85	P	
NY	POAS	PASNY NEW HYDRO	HY	12	WAT	12/85	P	
NY	NIMP	TRENTON	HY	6	WAT	05/86	P	
NY	NIMP	NINE MILE PT 2	NB	1080	UR	11/86	U	4
NY	POAS	786 MW FOSSIL	ST	786	BIT	04/87	P	
NY	POAS	FRATTSVILLE	HY	1000	WAT	09/87	P	
NY	NIMP	GLENN PARK	HY	16	WAT	11/87	P	
NY	NIMP	OSWEGATCHE	HY	1	WAT	11/87	P	
NY	NIMP	OSWEGO FALLS WEST	HY	3	WAT	11/87	P	
NY	POAS	PASNY SOLID WASTE	ST	80	REF	06/88	P	
NY	POAS	PASNY SOLID WASTE	ST	20	REF	06/88	P	
NY	NIMP	HUDSON FALLS	HY	33	WAT	11/88	P	
NY	NIMP	MECHANICVILLE	HY	8	WAT	11/88	P	
NY	NIMP	SUGAR ISLAND	HY	2	WAT	11/88	P	
NY	NIMP	SO. GLENS FALLS	HY	9	WAT	11/89	P	
NY	NIMP	LAKE ERIE 1	ST	850	BIT	11/91	P	

New England Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
ME	CEMP	BRUNSWICK 2 & 3	HY	7	WAT	04/83	U	
VT	VYGP	GREEN RIVER	HY	1	WAT	05/83	P	
VT	VTGP	BOLTON FALLS	HY	2	WAT	11/83	P	
NH	PSNH	EASTMAN FALLS 2	HY	3	WAT	11/83	P	
VT	VTGP	CHASE MILLS	HY	5	WAT	12/83	P	
NH	PSNH	SEABROOK 1	NP	1150	UR	03/84	V	4
VT	VTGP	BLACK RIVER	HY	13	WAT	05/84	P	
NH	PSNH	ERROL	HY	2	WAT	11/84	P	
VT	VTGP	FROG HOLLOW	HY	1	WAT	11/84	P	
VT	VTGP	HIGHGATE FALLS	HY	2	WAT	11/84	P	
NH	PSNH	MURPHY DAM	HY	2	WAT	11/84	P	
ME	BAHE	PENOBSCOT RIVER 2	HY	10	WAT	11/84	P	
MA	MMWE	SCOTT MILLS	HY	11	WAT	02/85	P	
ME	CEMP	MISC. HYDRO A	HY	16	WAT	04/85	P	
ME	CEMP	MISC. HYDRO B	HY	20	WAT	04/86	P	
CT	NOEU	MILLSTONE 3	NP	1150	UR	05/86	U	
NH	PSNH	SEABROOK 2	NP	1150	UR	06/86	U	4
VT	VTGP	EAST GEORGIA	HY	6	WAT	11/86	P	
VT	VTGP	HART ISLAND	HY	7	WAT	11/86	P	
ME	CEMP	MISC. HYDRO C	HY	39	WAT	04/87	P	
VT	VTGP	BELDEN	HY	1	WAT	11/87	P	
ME	BAHE	PENOBSCOT RIVER 3	HY	11	WAT	11/88	P	
ME	BAHE	PENOBSCOT RIVER 4	HY	4	WAT	11/89	P	
ME	CEMP	SEARS ISLAND	ST	560	COL	11/89	P	
VT	VTGP	E. RUTLAND	HY	1	WAT	04/90	P	
VT	VTGP	HUNTINGTON FALLS	HY	2	HY	04/90	P	
ME	BAHE	PENOBSCOT RIVER 5	HY	30	WAT	11/90	P	

NPCC

Northeast Power Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

New Brunswick Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	NB	LEPREAU 1	ZZ	638	UR	04/82	V	

Ontario Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	ONHY	PICKERING 5	ZZ	516	UR	04/83	V	
	ONHY	BRUCE 5	ZZ	750	UR	04/84	V	
	ONHY	PICKERING 6	ZZ	516	UR	04/84	V	
	ONHY	BRUCE 6	ZZ	750	UR	07/84	V	
	ONHY	PICKERING 7	ZZ	516	UR	09/84	V	
	ONHY	ATIKOKAN 1	ST	206	COL	10/84	V	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/85	P	
	ONHY	PICKERING 8	ZZ	516	UR	02/85	V	
	ONHY	DARLINGTON COMB. TURBINE	GT	10	FO2	10/85	U	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/86	P	
	ONHY	BRUCE 7	ZZ	750	UR	04/86	V	
	ONHY	BRUCE 8	ZZ	750	UR	01/87	V	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/87	P	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/88	P	
	ONHY	DARLINGTON 1	ZZ	881	UR	05/88	U	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/89	P	
	ONHY	DARLINGTON 2	ZZ	881	UR	02/89	U	
	ONHY	NEW HYDRO	HY	134	WAT	10/89	P	
	ONHY	DARLINGTON 3	ZZ	881	UR	11/89	U	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/90	P	
	ONHY	NEW HYDRO	HY	179	WAT	07/90	P	
	ONHY	DARLINGTON 4	ZZ	881	UR	09/90	U	
	ONHY	NEW HYDRO	HY	139	WAT	11/90	P	
	ONHY	PARALLEL GENERATION	ZZ	33	UNK	01/91	P	
	ONHY	NEW HYDRO	HY	67	WAT	05/91	P	
	ONHY	NEW HYDRO	HY	152	WAT	07/91	P	

Northeast Power Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Québec Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	HYQB	LG-3 1	HY	192	WAT	07/82	U	
	HYQB	LG-3 2	HY	192	WAT	10/82	U	
	HYQB	LG-3 3	HY	192	WAT	12/82	U	
	HYQB	LG-3 4	HY	192	WAT	01/83	U	
	HYQB	LG-3 5	HY	192	WAT	03/83	U	
	HYQB	LG-3 6	HY	192	WAT	04/83	U	
	HYQB	LG-3 7	HY	192	WAT	06/83	U	
	HYQB	LG-3 8	HY	192	WAT	07/83	U	
	HYQB	LG-3 9	HY	192	WAT	09/83	U	
	HYQB	GENTILLY 2	CA	685	WAT	10/83	V	
	HYQB	LG-3 10	HY	192	WAT	10/83	U	
	HYQB	LG-3 11	HY	192	WAT	12/83	U	
	HYQB	LG-3 12	HY	192	WAT	02/84	U	
	HYQB	LG-4 1	HY	293	WAT	02/84	U	
	HYQB	LG-4 2	HY	293	WAT	03/84	U	
	HYQB	LG-4 3	HY	293	WAT	06/84	U	
	HYQB	LG-4 4	HY	293	WAT	08/84	U	
	HYQB	LG-4 5	HY	293	WAT	09/84	U	
	HYQB	LG-4 6	HY	293	WAT	11/84	U	
	HYQB	LG-4 7	HY	293	WAT	12/84	U	
	HYQB	LG-4 8	HY	293	WAT	02/85	U	
	HYQB	LG-4 9	HY	293	WAT	03/85	U	
	HYQB	MANIC - 5 P.A. 1	HY	247	WAT	06/85	U	
	HYQB	MANIC 5 P.A. 2	HY	247	WAT	06/85	U	
	HYQB	MANIC - 5 P.A. 3	HY	247	WAT	08/85	U	
	HYQB	MANIC - 5 P.A. 4	HY	247	WAT	10/85	U	
	HYQB	DELANEY 1	PS	255	WAT	12/85	U	
	HYQB	DELANEY 2	PS	255	WAT	09/87	L	
	HYQB	UNKNOWN	UN	1400	UNK	10/87	P	
	HYQB	DELANEY 3	PS	255	WAT	12/87	L	
	HYQB	DELANEY 4	PS	255	WAT	02/88	L	
	HYQB	DELANEY 5	PS	255	WAT	04/88	L	
	HYQB	DELANEY 6	PS	255	WAT	08/88	L	
	HYQB	DELANEY 7	PS	255	WAT	10/88	L	
	HYQB	UNKNOWN	UN	900	UNK	10/88	P	
	HYQB	DELANEY 8	PS	255	WAT	02/89	L	
	HYQB	LG-1 1	HY	114	WAT	02/89	P	
	HYQB	DELANEY 9	PS	255	WAT	05/89	L	
	HYQB	LG-1 2	HY	114	WAT	05/89	P	
	HYQB	LG-1 3	HY	114	WAT	06/89	P	
	HYQB	DELANEY 10	PS	255	WAT	08/89	L	
	HYQB	LG-1 4	HY	114	WAT	08/89	P	
	HYQB	BRISAY 1	HY	218	WAT	10/89	P	
	HYQB	LG-1 5	HY	114	WAT	10/89	P	
	HYQB	UNKNOWN	UN	400	UNK	10/89	P	
	HYQB	BRISAY 2	HY	218	WAT	12/89	P	
	HYQB	LG-1 6	HY	114	WAT	12/89	P	
	HYQB	LAFORGE 1	HY	137	WAT	02/90	P	
	HYQB	LG-1 7	HY	114	WAT	02/90	P	
	HYQB	LAFORGE 1 2	HY	137	WAT	04/90	P	

NPCC

Continued

Northeast Power Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Québec Subregion *Continued*

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	HYQB	LG-1 8	HY	114	WAT	04/90	P	
	HYQB	LAFORGE 1 3	HY	137	WAT	06/90	P	
	HYQB	LG-1 9	HY	114	WAT	06/90	P	
	HYQB	LAFORGE 1 4	HY	137	WAT	08/90	P	
	HYQB	LG-1 10	HY	114	WAT	08/90	P	
	HYQB	GRANDE BALEINE-1 1	HY	392	WAT	10/90	P	
	HYQB	LAFORGE 1 5	HY	137	WAT	10/90	P	
	HYQB	UNKNOWN	UN	100	UNK	10/90	P	
	HYQB	GRANDE BALEINE-1 2	HY	392	WAT	12/90	P	
	HYQB	LAFORGE 1 6	HY	137	WAT	12/90	P	
	HYQB	GRANDE BALEINE-1 3	HY	392	WAT	02/91	P	
	HYQB	GRANDE BALEINE-1 4	HY	392	WAT	05/91	P	
	HYQB	GRANDE BALEINE-1 5	HY	392	WAT	08/91	P	
	HYQB	GRANDE BALEINE-2 1	HY	160	WAT	08/91	P	
	HYQB	GRANDE BALEINE-3 1	HY	152	WAT	08/91	P	
	HYQB	GRANDE BALEINE-2 2	HY	160	WAT	10/91	P	
	HYQB	GRANDE BALEINE-3 2	HY	152	WAT	10/91	P	
	HYQB	GRANDE BALEINE-2 3	HY	160	WAT	12/91	P	
	HYQB	GRANDE BALEINE-3 3	HY	152	WAT	12/91	P	

SERC

Southeastern Electric Reliability Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Florida Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
FL	STCM	ST. CLOUD 1	IC	2	NG	05/82	U	
FL	STCM	ST. CLOUD 3	IC	2	NG	05/82	U	
FL	LALW	MCINTOSH 3	ST	334	BIT	07/82	V	J
FL	SEBM	AIRPORT 1	IC	10	FO6	09/82	V	
FL	KISM	UNKNOWN 1	CT	31	NG	09/82	T	
FL	KISM	UNKNOWN 2	CA	10	NG	09/82	T	
FL	KISM	UNKNOWN 3	CA	10	NG	09/82	T	
FL	SEBM	AIRPORT 2	IC	10	FO6	12/82	V	
FL	FLPC	CRYSTAL RIVER 4	ST	640	BIT	12/82	V	
FL	FLPL	ST. LUCIE 2	NP	802	UR	05/83	V	J
FL	SECI	SEMINOLE 1	ST	600	BIT	06/83	V	
FL	SEBM	AIRPORT 3	IC	20	FO6	09/83	P	
FL	TALL	JACKSON BLUFF 1	HY	4	WAT	10/83	L	
FL	TALL	JACKSON BLUFF 2	HY	4	WAT	10/83	L	
FL	TALL	JACKSON BLUFF 3	HY	3	WAT	10/83	L	
FL	FLPC	CRYSTAL RIVER 5	ST	640	BIT	12/84	U	
FL	SECI	SEMINOLE 2	ST	600	BIT	01/85	U	
FL	TAEC	BIG BEND 4	ST	417	BIT	03/85	U	
FL	JACO	ST. JOHNS RIVER 1	ST	550	BIT	12/85	L	J
FL	ORLA	STANTON 1	ST	415	BIT	11/86	L	J
FL	JACO	ST. JOHNS RIVER 2	ST	550	BIT	06/87	L	J
FL	SECI	TAYLOR 1	ST	600	BIT	06/88	L	
FL	SECI	PEAT 1	ST	100	PEA	10/88	P	
FL	FLPL	MARTIN 3	ST	700	BIT	**/89	P	
FL	SECI	PEAT 2	ST	100	PEA	10/89	P	
FL	FLPL	MARTIN 4	ST	700	BIT	**/90	P	
FL	SECI	TAYLOR 2	ST	600	BIT	01/90	L	
FL	SECI	PEAT 3	ST	100	PEA	10/90	P	
FL	TAEC	MACINNES 1	ST	400	BIT	03/91	P	

Southern Companies Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
AL	ALAP	HARRIS 1,2	HY	117	WAT	04/83	V	
GA	SEPA	HARTWELL 3	HY	40	WAT	08/83	V	J
GA	GEPC	SCHERER 2	ST	888	BIT	02/84	V	J
GA	SEPA	RICHARD B. RUSSELL 1	HY	75	WAT	07/84	V	J
GA	SEPA	RICHARD B. RUSSELL 3	HY	75	WAT	01/85	V	J
AL	GEPC	BARTLETTS FERRY 5,6	HY	100	WAT	02/85	U	
AL	ALAP	MITCHELL 5-7	HY	91	WAT	04/85	U	
AL	ALAP	MILLER 2	ST	654	BIT	05/85	V	
GA	SEPA	RICHARD B. RUSSELL 5	PS	75	WAT	02/86	U	J
GA	SEPA	RICHARD B. RUSSELL 7	PS	75	WAT	08/86	U	J
GA	GEPC	SCHERER 3	ST	888	BIT	02/87	U	J
GA	GEPC	ROCKY MOUNTAIN 1,2,3	PS	675	WAT	04/87	U	
GA	GEPC	VOGTLE 1	NP	1150*	UR	04/87	V	J
GA	GEPC	VOGTLE 2	NP	1150*	UR	09/88	U	J
GA	GEPC	GOAT ROCK 7,8	HY	67	WAT	11/88	U	
GA	GEPC	SCHERER 4	ST	888	BIT	02/89	U	J
AL	ALAP	MILLER 3	ST	654	BIT	05/89	U	
AL	ALEC	UNNAMED UNIT	UN	60	UNK	06/89	P	
MS	SOMI	UNNAMED LIGNITE	ST	250	LIG	04/90	P	
AL	ALEC	UNNAMED UNIT	UN	30	UNK	06/90	P	
AL	ALAP	MILLER 4	ST	654	BIT	05/91	U	
AL	ALEC	UNNAMED UNIT	UN	30	UNK	06/91	P	

*75 MW of 1150 MW Vogtle unit capacity to participant in Florida Subregion.

SERC

Continued

Southeastern Electric Reliability Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Tennessee Valley Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
TN	TEVA	WATTS BAR 1	HP	1177	UR	83/84	V	
TN	TEVA	WATTS BAR 2	HP	1177	UR	81/85	V	
AL	TEVA	BELLEFONTE 1	HP	1213	UR	84/87	V	
AL	TEVA	BELLEFONTE 2	HP	1213	UR	82/88	V	
MS	TEVA	YELLOW CREEK 1*	HP	1265	UR	10/90*	U	
TN	TEVA	HARTSVILLE 1*	HB	1233	UR	84/91*	U	

Virginia-Carolinas Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
SC	SOCG	SUMMER 1	NP	900	UR	11/82	V	J
NC	CAPO	MAYO 1	ST	720	COL	83/83	V	
NC	DUPC	MCGUIRE 2	NP	1180	UR	86/83	V	
GA	SEPA	HARTWELL 5	HY	40	WAT	88/83	U	J
SC	SOCA	ST. STEPHEN HYDRO UNIT 1	HY	28	WAT	12/83	U	
SC	SOCA	ST. STEPHEN HYDRO UNIT 2	HY	28	WAT	12/83	U	
SC	SOCA	ST. STEPHEN HYDRO UNIT 3	HY	28	WAT	12/83	U	
SC	DUPC	CATAWBA 1	NP	1145	UR	83/84	V	
SC	SOCA	CROSS SITE UNIT 2	ST	450	BIT	85/84	U	
GA	SEPA	RICHARD B. RUSSELL 2	HY	75	WAT	10/84	U	J
GA	SEPA	RICHARD B. RUSSELL 4	HY	75	WAT	84/85	U	J
SC	DUPC	CATAWBA 2	NP	1145	UR	89/85	V	
NC	CAPO	HARRIS 1	NP	900	UR	85/85	V	
VA	VIEP	BATH COUNTY 1	PS	350	WAT	10/85	V	J
VA	VIEP	BATH COUNTY 2	PS	350	WAT	10/85	V	J
VA	VIEP	BATH COUNTY 4	PS	350	WAT	10/85	V	J
GA	SEPA	RICHARD B. RUSSELL 6	PS	75	WAT	85/86	U	J
VA	VIEP	BATH COUNTY 3	PS	350	WAT	10/86	V	J
VA	VIEP	BATH COUNTY 5	PS	350	WAT	10/86	V	J
VA	VIEP	BATH COUNTY 6	PS	350	WAT	10/86	V	J
GA	SEPA	RICHARD B. RUSSELL 8	PS	75	WAT	11/86	U	J
SC	SOCA	CROSS SITE UNIT 1	ST	450	BIT	86/88	L	
NC	CAPO	HARRIS 2	NP	900	UR	83/89	U	
SC	SOCG	UNDETERMINED 1	ST	550	COL	85/89	P	
VA	VIEP	NORTH ANNA 3	NP	907	UR	10/89	U	
SC	DUPC	BAD CREEK 1	PS	250	WAT	84/90	T	
SC	DUPC	BAD CREEK 2	PS	250	WAT	84/90	T	
NC	CAPO	MAYO 2	ST	720	COL	83/91	U	
SC	DUPC	BAD CREEK 3	PS	250	WAT	84/91	T	
SC	DUPC	BAD CREEK 4	PS	250	WAT	84/91	T	
SC	SOCG	UNDETERMINED 2	ST	550	COL	85/91	P	
SC	SOCA	CROSS SITE UNIT 3	ST	450	BIT	86/91	L	

*Deferred indefinitely.

SPP

Southwest Power Pool
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Group A Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
LA	GUSU	NELSON 6	ST	548	SUB	05/82	V	J
LA	GUSU	NELSON 7	GT	90	NG	06/82	V	
LA	CELE	RODEMACHER 2	ST	536	BIT	06/82	V	J
AR	MSUI	INDEPENDENCE 1	ST	816	SUB	01/83	V	J
MS	MSUI	GRAND GULF 1	NB	1250	UR	02/83	V	J
LA	CAJN	BIG CAJUN 2, UNIT 3	ST	510	SUB	06/83	V	J
LA	MSUI	WATERFORD 3	HP	1104	UR	07/83	V	
AR	MSUI	INDEPENDENCE 2	ST	816	SUB	01/85	U	J
LA	GUSU	RIVER BEND 1	NB	940	UR	12/85	U	J
LA	SOEP	DOLET HILLS 1	ST	640	LIG	02/86	U	J
LA	CAJN	BIG CAJUN 1, UNIT 3	GT	70	FO2	05/86	P	
LA	CAJN	OXBOW 1	ST	512	LIG	11/86	L	
LA	MSUI	WILTON 1	ST	800	COL	06/88	P	
MS	MSUI	GRAND GULF 2	NB	1250	UR	11/88	U	J
LA	CAJN	CHALKLEY 1	GT	70	FO2	05/89	P	
LA	CAJN	VATICAN 1	GT	50	FO2	05/89	P	
AR	MSUI	ALEC 1	ST	800	LIG	01/90	P	J
LA	GUSU	NELSON 5	ST	540	SUB	01/90	U	
LA	CAJN	OXBOW 2	ST	512	LIG	11/90	T	
LA	MSUI	WILTON 2	ST	800	COL	11/90	P	
AR	MSUI	ALEC 2	ST	800	LIG	11/91	P	J

Group B Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MO	SWPA	HARRY S. TRUMAN 1	PS	27	WAT	04/82	V	
OK	WEFA	HUGO 1	ST	376	SUB	04/82	V	
MO	SWPA	HARRY S. TRUMAN 3	PS	27	WAT	05/82	V	
MO	SWPA	HARRY S. TRUMAN 4	PS	27	WAT	06/82	V	
TX	SWPS	TOLK 1	ST	508	COL	06/82	V	
MO	SWPA	HARRY S. TRUMAN 2	PS	27	WAT	09/82	V	
MO	SWPA	HARRY S. TRUMAN 6	PS	27	WAT	09/82	V	
MO	SWPA	CLARENCE CANNON 1	PS	32	WAT	11/84	U	
MO	SWPA	CLARENCE CANNON 2	HY	28	WAT	11/84	U	
OK	OKGE	MUSKOGEE 6	ST	515	SUB	11/84	U	
TX	SOEP	PIRKEY 1	ST	640	LIG	02/85	U	
TX	SWPS	TOLK 2	ST	508	COL	06/85	L	
OK	GRRD	GRDA 2	ST	490	COL	01/86	L	
OK	OKGE	UNKNOWN	CT	200	FO2	06/88	P	
TX	SWPS	SPS 6	ST	600	COL	06/89	P	
OK	OKGE	UNKNOWN	ST	500	SUB	06/89	P	
OK	PSOK	COAL UNNAMED	ST	700	SUB	01/91	P	
OK	OKGE	UNKNOWN	ST	500	SUB	06/91	P	

SPP

Continued

Southwest Power Pool
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Group C Subregion

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MO	ASEC	THOMAS HILL 3	ST	630	BIT	06/82	U	
MO	SPSR	SOUTHWEST-GT1	GT	44	NG	10/82	U	
MO	SPSR	SOUTHWEST-GT2	GT	44	NG	10/82	U	
KS	KAPL	JEFFREY 3	ST	680	SUB	06/83	U	J
KS	SUNC	HOLCOMB 1	ST	280	COL	09/83	U	
KS	KAGE	WOLF CREEK 1	NP	1150	UR	06/84	U	J
MO	EMDE	UNKNOWN	GT	90	NG	06/86	P	
MO	ASEC	UNDETERMINED	ST	630	BIT	06/88	P	
MO	EMDE	UNKNOWN	ST	90	COL	06/89	P	J
MO	RIPU	UNKNOWN	ST	100	BIT	05/90	P	J
KA	KACY	NEARMAN STATION N-2	ST	310	COL	01/91	P	
MO	ASEC	UNDETERMINED	ST	630	BIT	06/91	P	
KA	KAGE	UNDETERMINED	GT	50	UNK	06/91	P	

WSCC

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Northwest Power Pool Area

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
OR	USCE	BONNEVILLE 2ND PH 13	HY	76	WAT	05/82	V	
WA	USPH	PUMP GEN. 9	PS	0	WAT	06/82	V	
OR	USCE	BONNEVILLE 2ND PH 12	HY	76	WAT	07/82	V	
OR	USCE	BONNEVILLE 2ND PH 11	HY	76	WAT	09/82	V	
WA	TCL	E.B.C. 4.6 1	HY	2	WAT	09/82	L	J
WA	TCL	P.E.C. 66.8 1	HY	2	WAT	09/82	L	J
WA	USPH	PUMP GEN.10	PS	0	WAT	10/82	V	
WA	USPH	PUMP GEN.11	PS	0	WAT	02/83	V	
WA	TCL	MAYFIELD 4	HY	39	WAT	04/83	U	
WA	USPH	PUMP GEN. 12	PS	0	WAT	04/83	V	
UT	UPLC	HUNTER 3	ST	490	BIT	06/83	U	
ID	IPC	TAMARACH	CC	3	WD	06/83	L	
WA	WWPC	KETTLE FALLS	ST	42	WD	09/83	U	
ID	IPC	CASCADE	HY	18	WAT	01/84	U	
MT	MPC	COLSTRIP 3	ST	700	BIT	01/84	U	J
WA	BPA	WNP 2	NB	1100	UR	02/84	V	
MT	USCE	LIBBY UNIT 5	HY	121	WAT	05/84	U	
MT	USCE	LIBBY UNIT 6	HY	121	WAT	05/84	T	
MT	USCE	LIBBY UNIT 7	HY	121	WAT	05/84	T	
MT	USCE	LIBBY UNIT 8	HY	121	WAT	05/84	T	
ID	IPC	TWIN FALLS LOW LINE	HY	9	WAT	05/84	L	
WA	TCL	MAIN CANAL HEADWORKS 1	HY	11	WAT	06/84	T	J
WA	TCL	MAIN CANAL HEADWORKS 2	HY	11	WAT	06/84	T	J
UT	UPLC	MILFORD 1	GE	20	GST	06/84	L	
WA	TCL	P.E.C. HEADWORKS 1	HY	6	WAT	06/84	L	J
ID	IPC	MORA CANAL	HY	2	WAT	07/84	L	
UT	DGTC	BONANZA 1	ST	400	BIT	12/84	U	
WA	TCL	SUMMER FALLS 1	HY	47	WAT	05/85	T	J
WA	TCL	SUMMER FALLS 2	HY	47	WAT	05/85	T	J
ID	IPC	COGEN NO. 1	CC	15	UNK	06/85	P	
UT	UPLC	HUNTER 4	ST	490	BIT	06/85	L	
MT	MPC	COLSTRIP 4	ST	700	BIT	07/85	U	J
OR	USCE	BONNEVILLE FW SITE 3	HY	2	WAT	09/85	T	
OR	USCE	BONNEVILLE FW SITE 4	HY	3	WAT	09/85	T	
WA	USCE	BONNEVILLE FW SITE 6	HY	3	WAT	09/85	T	
ID	IPC	LUCKY PEAK	HY	75	WAT	09/85	T	
WA	SCL	BOUNDARY 33	HY	0	WAT	11/85	L	
WA	SCL	SOUTH FORK TOLT	HY	15	WAT	12/85	L	
WA	SCL	BOUNDRY 34	HY	0	WAT	02/86	L	
ID	IPC	HF BANKS	HY	62	WAT	04/86	L	
WA	BPA	WNP 1	NP	1250	UR	06/86	U	
ID	IPC	SWAN FALLS REBUILD	HY	13	WAT	07/86	L	
WA	SCL	ROSS 1-4	HY	79	WAT	12/86	T	
WA	BPA	WNP 3	NP	1240	UR	12/86	U	J
ID	IPC	COGEN NO. 2	CC	20	UNK	06/87	P	
OR	USCE	STRUBE UNIT 1	HY	5	WAT	06/87	T	
WA	USCE	THE DALLES N FISHWAY PH	HY	5	WAT	06/87	T	
OR	USCE	COUGAR UNIT 3	HY	40	WAT	07/87	T	
MT	MPC	RYAN UNIT 7	HY	40	WAT	08/87	P	
ID	IPC	MILNER CANAL	HY	3	WAT	10/87	L	

WSCC

Continued

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Northwest Power Pool Area *Continued*

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MT	MPC	COMBUSTION TURBINES	GT	50	UNK	11/87	P	
ID	IPC	KAHAKA RAPIDS	HY	8	WAT	01/88	L	
ID	IPC	MF FERNCROFT	HY	113	WAT	04/88	L	
MT	MPC	KERR UNIT 1	HY	9	WAT	05/88	P	
OR	USCE	BLUE R LAKE PH UNIT 1	HY	10	WAT	06/88	P	
OR	USCE	BLUE R LAKE PH UNIT 2	HY	10	WAT	06/88	P	
WA	WWPC	CRESTON 1	ST	500	SUB	07/88	L	
MT	MPC	HAUSER UNIT 7	HY	25	WAT	08/88	P	
MT	MPC	KERR UNIT 2	HY	9	WAT	09/88	P	
MT	MPC	TH. FALLS UNIT 7	HY	50	WAT	09/88	P	
WA	USCE	WYNOOCHEE UNIT 1	HY	2	WAT	10/88	P	
WA	USCE	WYNOOCHEE UNIT 2	HY	4	WAT	10/88	P	
WA	USCE	WYNOOCHEE UNITS 3	HY	4	WAT	10/88	P	
WY	PPL	WYODAK 2	ST	315	BIT	12/88	T	J
MT	MPC	KERR UNIT 3	HY	10	WAT	05/89	P	
ID	IPC	COGEN NO. 3	CG	20	UNK	06/89	P	
MT	MPC	THERMAL PLANT	ST	330	BIT	07/89	P	
OR	USCE	MCNARY 2ND PH 15	HY	129	WAT	08/89	P	
ID	IPC	A.J. WILEY	HY	86	WAT	11/89	L	
MT	MPC	COMBUSTION TURBINE	GT	50	UNK	11/89	P	
OR	USCE	MCNARY 2ND PH 16	HY	129	WAT	11/89	P	
UT	DGT	BONANZA 2	ST	400	BIT	01/90	P	
WA	WWPC	CRESTON 2	ST	500	SUB	01/90	L	
OR	USCE	MCNARY 2ND PH 17	HY	129	WAT	02/90	P	
OR	USCE	MCNARY 2ND PH 18	HY	129	WAT	05/90	P	
OR	USCE	MCNARY 2ND PH 19	HY	129	WAT	08/90	P	
OR	USCE	MCNARY 2ND PH 20	HY	129	WAT	11/90	P	
WA	PSPL	SKAGIT 1	HB	1275	UR	01/91	L	
ID	IPC	COGEN NO. 4	CG	25	UNK	06/91	P	
ID	IPC	DIKE	HY	70	WAT	06/91	L	

Rocky Mountain Power Area

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
WY	BEPC	LARAMIE RIVER STATION 2	ST	550	SUB	04/82	V	J
CO	USLM	MOUNT ELBERT 2	PS	100	WAT	08/83	V	
CO	CUEA	CRAIG 3	ST	400	BIT	10/83	U	
CO	PRPA	RAWHIDE 1	ST	250	BIT	04/84	U	
CO	USUC	MCPHEE POWER PLANT	HY	1	WAT	12/85	P	
CO	USUC	RIDGEWAY POWER PLANT	HY	2	WAT	12/85	P	
WY	USLM	WIND FARM	WM	100	WND	12/85	P	
CO	USUC	JORDANELLE DAM	HY	10	WAT	12/86	P	
NM	USUC	NAVAJO DAM	HY	12	WAT	12/86	P	
CO	PSC	SOUTHEAST 1	ST	485	BIT	04/87	P	J
CO	CUEA	SOUTHWEST 1	ST	400	BIT	10/87	P	
CO	PSC	SOUTHEAST 2	ST	485	BIT	04/89	P	J
CO	CUEA	SOUTHWEST 2	ST	400	BIT	10/89	P	

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Arizona-New Mexico Power Area

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
CA	IID	DROP 5	HY	3	WAT	04/82	L	
NM	PNM	SAN JUAN 4	ST	472	BIT	05/82	V	
CA	IID	DROP 1 (3)	HY	5	WAT	04/83	T	
CA	IID	EAST HIGHLINE (1)	HY	2	WAT	04/83	T	
AZ	APS	PALO VERDE 1	NP	1270	UR	05/83	V	J
CA	IID	GEOTHERMAL 1	GE	50	GST	06/83	P	
AZ	APS	PALO VERDE 2	NP	1270	UR	05/84	U	J
NM	PEGT	ESCALANTE 1	ST	210	BIT	06/84	U	
AZ	TEP	SPRINGERVILLE 1	ST	350	SUB	06/85	U	
AZ	APS	PALO VERDE 3	NP	1270	UR	05/86	U	J
CA	IID	GEOTHERMAL 2	GE	50	GST	06/86	P	
AZ	APS	UNDETERMINED	GT	50	FO2	05/87	P	
AZ	TEP	SPRINGERVILLE 2	ST	350	SUB	06/87	U	
CA	IID	GEOTHERMAL 3	GE	50	GST	06/88	P	
NM	PEGT	ESCALANTE 2	ST	210	BIT	10/88	P	
AZ	AEPC	AEPCO 1	ST	275	SUB	01/90	P	J
NM	PNM	NEW MEXICO STATION	ST	490	BIT	05/90	P	J
TX	EPE	UNDETERMINED	ST	75	BIT	05/90	P	
AZ	APS	CHOLLA 5	ST	340	SUB	06/90	U	
CA	IID	GEOTHERMAL 4	GE	50	GST	06/90	P	
AZ	SRP	CORONADO 3	ST	350	SUB	05/91	P	
AZ	TEP	SPRINGERVILLE 3	ST	350	SUB	06/91	T	
AZ	APS	UNDETERMINED	ZZ	150	UNK	06/91	P	

WSCC

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Continued

California-Nevada Power Area

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
CA	PG&E	LOUSIANA PACIFIC-STANDARD	CG	3	WD	04/82	V	
CA	PG&E	OIL FIELD COGENERATION OED 2	CG	6	CRU	04/82	P	
CA	PG&E	OIL FIELD COGENERATION OED 3	CG	6	CRU	04/82	P	
CA	PG&E	OIL FIELD COGENERATION OED 4	CG	6	CRU	04/82	P	
CA	MWD	SEPULVEDA CANYON 1	HY	9	WAT	04/82	V	
NV	NEVP	CLARK 8	GT	70	NG	05/82	V	
CA	MWD	TEHESCAL	HY	3	WAT	05/82	V	
CA	MID	CANAL CREEK	HY	0	WAT	06/82	U	
CA	MID	FAIRFIELD MID	HY	0	WAT	06/82	U	
CA	PG&E	IRON MNTN. MINES 2	HY	1	WAT	06/82	L	
CA	PG&E	LOUISIANA PACIFIC	CG	25	WD	06/82	L	
CA	PG&E	MCFADDEN FARMS	HY	0	WAT	06/82	T	
CA	PG&E	NAPA STATE HOSP. 2	CG	1	NG	06/82	V	
CA	SCE	SAN ONOFRE 2	NP	1100	UR	06/82	V	J
CA	SCE	SMALL HYDRO	HY	1	WAT	06/82	P	
CA	PG&E	SO CAL KERN	CG	4	CRU	06/82	V	
CA	PG&E	SSJID FRANKENHEIMER	HY	0	WAT	06/82	U	
CA	PG&E	US WIND POWER	WH	1	WND	06/82	P	
CA	PG&E	OIL FIELD COGEN OED 5	CG	6	CRU	07/82	P	
CA	PG&E	SUP FARMING	ST	5	ZZ	07/82	P	
CA	SCE	COGENERATION	CG	20	UNK	08/82	P	
CA	MWD	CORONA	HY	3	WAT	08/82	V	
CA	PG&E	DIABLO CANYON 1	NP	1084	UR	08/82	V	
CA	NCPA	GEOTHERMAL PROJ 1	GE	53	GST	09/82	U	
CA	NCPA	GEOTHERMAL PROJ 2	GE	53	GST	09/82	U	
CA	CDWR	W.E. WARREN 1	HY	30	WAT	09/82	V	
CA	PG&E	BIOMASS HUDSON LUMBER	ST	6	WD	10/82	P	
CA	PG&E	HELMS PUMPED STORAGE 1	PS	374	WAT	10/82	V	
CA	PG&E	OIL FIELD COGEN OED 6	CG	6	CRU	10/82	P	
CA	PG&E	PCWA HELL HOLE	HY	0	WAT	11/82	L	
CA	PG&E	TEN SECTION 1	CG	3	CRU	11/82	V	J
CA	PG&E	FIRST CHOWCHILLA	GT	10	NG	12/82	P	
CA	PG&E	GEYSERS 17	GE	110	GST	12/82	U	
CA	PG&E	HELMS PUMPED STORAGE 2	PS	374	WAT	12/82	V	
CA	CDWR	W.E. WARREN 2	HY	30	WAT	12/82	U	
CA	PG&E	OIL FIELD COGEN OED 7	CG	6	CRU	01/83	P	
CA	PG&E	SLY CREEK	HY	7	WAT	01/83	L	
CA	PG&E	HELMS PUMPED STORAGE 3	PS	375	WAT	02/83	V	
CA	MWD	PERRIS 1	HY	7	WAT	03/83	U	
CA	PG&E	DIABLO CANYON 2	NP	1106	UR	04/83	V	
CA	PG&E	OIL FIELD COGEN OED 8	CG	7	CRU	04/83	P	
CA	CDWR	PINE FLAT	HY	80	WAT	04/83	U	
CA	PG&E	SID MONTICELLO	HY	7	WAT	04/83	L	
CA	PG&E	GEYSERS 18	GE	110	GST	05/83	U	
NV	NEVP	REID GARDNER 4	ST	250	BIT	05/83	V	J
CA	LDWP	COGENERATION	CG	50	UNK	06/83	P	
CA	PG&E	EBMUD PARDEE UNIT 3	HY	0	WAT	06/83	V	
CA	PG&E	HBMWD MATTHEWS DAM	HY	0	WAT	06/83	L	
CA	PG&E	IRON MNTN MINES 3	HY	1	WAT	06/83	L	
CA	PG&E	SLO SALINAS RES	HY	0	WAT	06/83	L	
CA	PG&E	US WIND PWR	WH	4	WND	06/83	P	
CA	PG&E	OIL FIELD COGEN OED 9	CG	6	CRU	07/83	P	
CA	SCE	SAN ONOFRE 3	NP	1100	UR	07/83	V	J
CA	PG&E	SIMPSON PAPER CO	ST	0	NG	07/83	P	
CA	PG&E	COMANCHE	HY	1	WAT	08/83	L	
CA	SCE	SMALL COGENERATION	CG	26	UNK	08/83	P	
CA	SCE	SMALL HYDRO	HY	11	WAT	08/83	P	
CA	SCE	SMALL HYDRO	HY	10	WAT	08/83	P	
CA	SCE	WIND	WH	8	WND	08/83	P	
CA	PG&E	PROJ 8 OAK FLAT	HY	1	WAT	09/83	L	
CA	PG&E	KERCKHOFF 2	HY	151	WAT	10/83	U	
CA	PG&E	OIL FIELD COGEN OED 10 CG	CG	6	CRU	10/83	P	
CA	MWD	RIO HONDO 1	HY	2	WAT	10/83	P	

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

California-Nevada Power Area *Continued*

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
CA	PG&E	LOCKHEED SUNNYVALE	CC	50	NG	11/83	P	
CA	SMUD	GEOTHERMAL 1	GE	55	GST	12/83	L	
CA	PG&E	PAUL MASSON	CC	0	NG	12/83	V	
CA	PG&E	PROJ H SCOTT DAM	HY	1	WAT	12/83	L	
CA	SCE	SMALL HYDRO	HY	14	WAT	12/83	P	
CA	PG&E	WIND FARMS	WH	1	WND	12/83	L	
CA	SMUD	CAMP FAR WEST	HY	0	WAT	01/84	L	
CA	PG&E	CROWN ZELLERBACH	CC	35	NG	01/84	P	
CA	SDGE	NILAND 1	GE	24	GST	01/84	P	
CA	SCE	SMALL HYDRO	HY	1	WAT	01/84	P	
CA	CDWR	THERMALITO AFTERBAY	HY	13	WAT	01/84	T	
CA	PG&E	SMALL HYDRO PROJECT D	HY	1	WAT	02/84	P	
CA	PG&E	SMALL HYDRO PROJECT E	HY	1	WAT	02/84	P	
CA	PG&E	SMALL HYDRO PROJECT F	HY	0	WAT	02/84	P	
CA	CDWR	SUTTER BUTTE	HY	2	WAT	02/84	L	
CA	PG&E	PROJ A NEWCASTLE	HY	0	WAT	03/84	P	
CA	PG&E	PROJ C MC CLOUD	HY	2	WAT	03/84	P	
CA	CDWR	BOTTLE ROCK	GE	55	GST	06/84	U	
CA	PG&E	GEOTHERMAL (OXY)	GE	80	GST	06/84	P	
CA	SCE	GEOTHERMAL 1	GE	5	GST	06/84	P	
CA	SCE	GEOTHERMAL 2	GE	9	GST	06/84	P	
CA	PG&E	SMALL HYDRO PROJECT I	HY	0	WAT	06/84	P	
CA	PG&E	WILD WELL GEOTHERMAL	GE	5	GST	06/84	P	
CA	PG&E	WIND FARMS	WH	5	WND	06/84	P	
CA	PG&E	WOOD WASTE PROJECT	BT	40	ZZ	06/84	L	
CA	PG&E	OIL FIELD/REF COGEN	CC	100	CRU	07/84	P	
CA	MWD	RED MOUNTAIN 1	HY	6	WAT	07/84	T	
CA	PG&E	SMALL HYDRO PROJECT K	HY	3	WAT	07/84	L	
CA	SCE	SMALL COGENERATION	CC	40	UNK	08/84	P	
CA	SCE	SMALL HYDRO	HY	22	WAT	08/84	P	
CA	SCE	WIND	WH	14	WND	08/84	P	
CA	MWD	COYOTE CR 1	HY	3	WAT	09/84	P	
CA	MWD	VALLEY VIEW 1	HY	4	WAT	09/84	T	
CA	PG&E	BIOMASS CPL	BT	50	ZZ	10/84	L	
CA	PG&E	OIL FIELD COGEN OED 11	CC	6	CRU	10/84	L	
CA	CDWR	THERMALITO DIV. DAM	HY	3	WAT	10/84	L	
HV	SPP	VALMY 2	ST	250	BIT	10/84	U	J
CA	SCE	GEOTHERMAL 3	GE	47	GST	11/84	P	
CA	PG&E	UNION OIL COGEN.	CC	28	WH	12/84	P	
CA	PG&E	CHAMBERS JACKASS DIV	HY	0	WAT	01/85	P	
CA	SDGE	NILAND 2	GE	49	GST	01/85	P	
CA	PG&E	OTHER DIV/STOR INCREASE	HY	0	WAT	01/85	P	
CA	PG&E	SMALL HYDRO PROJECT N	HY	2	WAT	01/85	P	
CA	CDWR	ALAMO 1	HY	17	WAT	02/85	U	
CA	CDWR	CASTAIC OUTLET	HY	1	WAT	02/85	P	
CA	CDWR	PYRAMID DAM OUTLET 1	HY	1	WAT	02/85	L	
CA	LDWP	COGENERATION	CC	80	UNK	04/85	P	
CA	PG&E	GEYSERS 16	GE	110	GST	06/85	L	
CA	PG&E	MOSS LANDING GAS EXPANDER	CC	10	NG	06/85	P	
CA	PG&E	WIND FARMS	WH	0	WND	06/85	P	
CA	CDWR	MOJAVE SIPHON 1	HY	7	WAT	07/85	L	
CA	PG&E	OIL FIELD/REF COGEN	CC	100	CRU	07/85	P	
CA	CDWR	PALERMO	HY	1	WAT	07/85	T	
CA	CDWR	SOUTH GEYSERS	GE	55	GST	07/85	T	
CA	SCE	SMALL COGENERATION	CC	20	UNK	08/85	P	
CA	SCE	SMALL HYDRO	HY	10	WAT	08/85	P	
CA	SCE	WIND	WH	16	WND	08/85	P	
CA	CDWR	DEL VALLE 2	HY	0	WAT	09/85	L	
CA	CDWR	LAS FLORES	HY	0	WAT	09/85	P	
CA	PG&E	SOLID WASTE RECOVERY SF	ST	40	REF	10/85	L	
CA	CDWR	LAKE DAVIS	HY	1	WAT	12/85	L	
CA	CDWR	LAKE ISABELLA DAM	HY	0	WAT	12/85	L	
CA	PG&E	MOKELUMNE IMPROVEMENTS	HY	3	WAT	01/86	P	
CA	PG&E	OTHER DIV/STOR INCREASE	HY	0	WAT	01/86	P	

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Continued

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

California-Nevada Power Area *Continued*

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
CA	PG&E	PROJ G 2 MOKELUMNE	HY	1	WAT	01/86	P	
CA	PG&E	PROJ G 3 WEST PT UNIT 2	HY	7	WAT	01/86	P	
CA	PG&E	PROJ G 4 SALT SPRINGS 3	HY	6	WAT	01/86	P	
CA	PG&E	PROJ G1 DOAKS PH PIONEER	HY	1	WAT	01/86	P	
CA	PG&E	PROJ J CRESTA PH UNIT 3	HY	18	WAT	01/86	P	
CA	PG&E	PROJ J PH CRESTA DAM	HY	0	WAT	01/86	P	
CA	PG&E	PROJ J PH ROCK CREEK DAM	HY	1	WAT	01/86	P	
CA	PG&E	PROJ J ROCK CREEK UNIT 3	HY	36	WAT	01/86	P	
CA	PG&E	TEN SECTION 2	CG	5	CRU	01/86	P	J
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	30	WAT	01/86	P	
CA	PG&E	GEYSERS 20	GE	110	GST	03/86	P	
NV	HEVP	ALLEN 1	ST	500	BIT	05/86	P	J
CA	PG&E	BELDEN YELLOW CREEK	HY	8	WAT	05/86	P	
CA	SCE	LARGE COGENERATION	CG	75	UNK	06/86	P	
CA	SCE	SMALL HYDRO	HY	8	WAT	06/86	P	
CA	SCE	SOLAR	SO	0	SUN	06/86	P	
CA	SCE	WIND	WH	20	WND	06/86	P	
CA	PG&E	WIND FARMS	WH	9	WND	06/86	P	
UT	LDWP	INTERMOUNTAIN 1	ST	750	BIT	07/86	L	J
CA	PG&E	OID & SJID SAND BAR	HY	12	WAT	07/86	P	J
CA	PG&E	OIL FIELD/REF COGEN	CG	100	CRU	07/86	P	
CA	SCE	BALSAM MEADOW HYDRO	HY	200	WAT	08/86	P	
CA	SMUD	JONES FORK	HY	10	WAT	11/86	P	
CA	CDWR	HONEY LAKE HYBRID	CG	55	WD	12/86	P	
CA	SMUD	GEOTHERMAL 2	GE	55	GST	01/87	P	
CA	PG&E	OTHER DIV/STOR INCREASE	HY	0	WAT	01/87	P	
CA	PG&E	SMALL HYDRO BUCKS PROJ	HY	17	WAT	01/87	P	
CA	PG&E	SMALL HYDRO PROJECT L	HY	14	WAT	01/87	P	
CA	PG&E	TEXACO OIL FIELD CG	CG	233	PC	01/87	P	
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	50	WAT	01/87	P	
NV	HEVP	ALLEN 2	ST	500	BIT	05/87	P	J
CA	SCE	FUEL CELL 1	FC	11	UNK	06/87	P	
CA	SCE	GEOTHERMAL	GE	52	GST	06/87	P	
CA	SCE	GEOTHERMAL	GE	52	GST	06/87	P	
NV	SPP	GEOTHERMAL 1	GE	50	GST	06/87	P	
NV	SPP	GEOTHERMAL 2	GE	50	GST	06/87	P	
CA	SCE	LARGE COGENERATION	CG	75	UNK	06/87	P	
CA	SCE	SOLAR	SO	10	SUN	06/87	P	
CA	SCE	WIND	WH	20	WND	06/87	P	
CA	PG&E	WIND FARMS	WH	12	WND	06/87	P	
UT	LDWP	INTERMOUNTAIN 2	ST	750	BIT	07/87	L	J
CA	PG&E	OIL FIELD REFINERY COGEN	CG	130	CRU	07/87	P	
CA	SCE	DINKEY CREEK	HY	120	WAT	08/87	P	
CA	SDGE	GEOTHERMAL 1	GE	37	GST	01/88	P	
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	50	WAT	01/88	P	
CA	PG&E	UNIDENTIFIED SMALL HYDRO	HY	10	WAT	01/88	P	
NV	HEVP	ALLEN 3	ST	500	BIT	05/88	P	J
CA	SCE	GEOTHERMAL	GE	52	GST	06/88	P	
CA	PG&E	GEYSERS 19	GE	55	GST	06/88	P	
CA	PG&E	GEYSERS 22	GE	110	GST	06/88	P	
CA	SCE	LARGE COGENERATION	CG	75	UNK	06/88	P	
CA	SCE	SOLAR	SO	20	SUN	06/88	P	
CA	SCE	SOLAR	SO	5	SUN	06/88	P	
CA	SCE	WIND	WH	14	WND	06/88	P	
CA	SCE	WIND	WH	20	WND	06/88	P	
CA	PG&E	WIND FARMS	WH	14	WND	06/88	P	
UT	LDWP	INTERMOUNTAIN 3	ST	750	BIT	07/88	L	J
CA	SCE	SOLAR	SO	100	SUN	08/88	P	
CA	LDWP	N. BRAWLEY 2	GE	44	ZZ	10/88	P	
CA	PG&E	GEYSERS 21	GE	110	GST	12/88	P	
CA	SCE	LARGE HYDRO	HY	284	WAT	12/88	P	
CA	PG&E	OTHER DIV/STOR INCREASE	HY	8	WAT	01/89	P	
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	50	WAT	01/89	P	
CA	PG&E	UNIDENTIFIED SMALL HYDRO	HY	5	WAT	01/89	P	
CA	SCE	FUEL CELLS 2	FC	2	UNK	06/89	P	

Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

California-Nevada Power Area *Continued*

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
CA	PG&E	GENERIC BIOMASS	BT	25	WD	06/89	P	
CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/89	P	
CA	SCE	GEOTHERMAL	GE	32	GST	06/89	P	
CA	PG&E	GEYSERS 23	GE	110	GST	06/89	P	
CA	SCE	LARGE COGENERATION	CG	75	UNK	06/89	P	
CA	SCE	SOLAR	SO	30	SUN	06/89	P	
NV	LDWP	WHITE PINE 1	BT	750	BIT	06/89	P	J
CA	SCE	WIND	WR	20	WND	06/89	P	
CA	PG&E	WIND FARMS	WR	12	WND	06/89	P	
UT	LDWP	INTERMOUNTAIN 4	BT	750	BIT	07/89	L	J
CA	LDWP	M. BRAWLEY 3	PC	44	ZZ	10/89	P	
CA	PG&E	HOT WATER GEOTHERMAL	GE	30	GST	01/90	P	
CA	PG&E	OTHER DIV/STOR INCREASE	HY	6	WAT	01/90	P	
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	30	WAT	01/90	P	
CA	PG&E	UNIDENTIFIED SMALL HYDRO	HY	4	WAT	01/90	P	
CA	SCE	FUEL CELLS 3	FC	22	UNK	06/90	P	
CA	PG&E	GENERIC BIOMASS	CG	25	WD	06/90	P	
CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/90	P	
CA	SCE	GEOTHERMAL	GE	156	GST	06/90	P	
CA	SCE	LARGE COGENERATION	CG	75	UNK	06/90	P	
CA	LDWP	SMALL HYDRO DEV.	HY	13	WAT	06/90	P	
CA	SCE	SOLAR	SO	100	SUN	06/90	P	
NV	LDWP	WHITE PINE 2	BT	750	BIT	06/90	P	J
CA	SCE	WIND	WR	20	WND	06/90	P	
CA	PG&E	WIND FARMS	WR	9	WND	06/90	P	
CA	PG&E	HOT WATER GEOTHERMAL	GE	30	GST	01/91	P	
CA	PG&E	MAJOR DIV/STOR INCR. ACT	HY	0	WAT	01/91	P	
CA	PG&E	UNIDENTIFIED MAJOR HYDRO	HY	30	WAT	01/91	P	
CA	PG&E	UNIDENTIFIED SMALL HYDRO	HY	1	WAT	01/91	P	
CA	SCE	FUEL CELLS 4	FC	30	UNK	06/91	P	
CA	PG&E	GENERIC BIOMASS	CG	25	WD	06/91	P	
CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/91	P	
CA	PG&E	GEYSERS 24	GE	110	GST	06/91	P	
CA	SCE	IVANPAH 1	BT	500	BIT	06/91	P	J
CA	SCE	SMALL COGENERATION	CG	30	UNK	06/91	P	
CA	SCE	SOLAR	SO	100	SUN	06/91	P	
CA	SCE	WIND	WR	30	WND	06/91	P	

WSCC

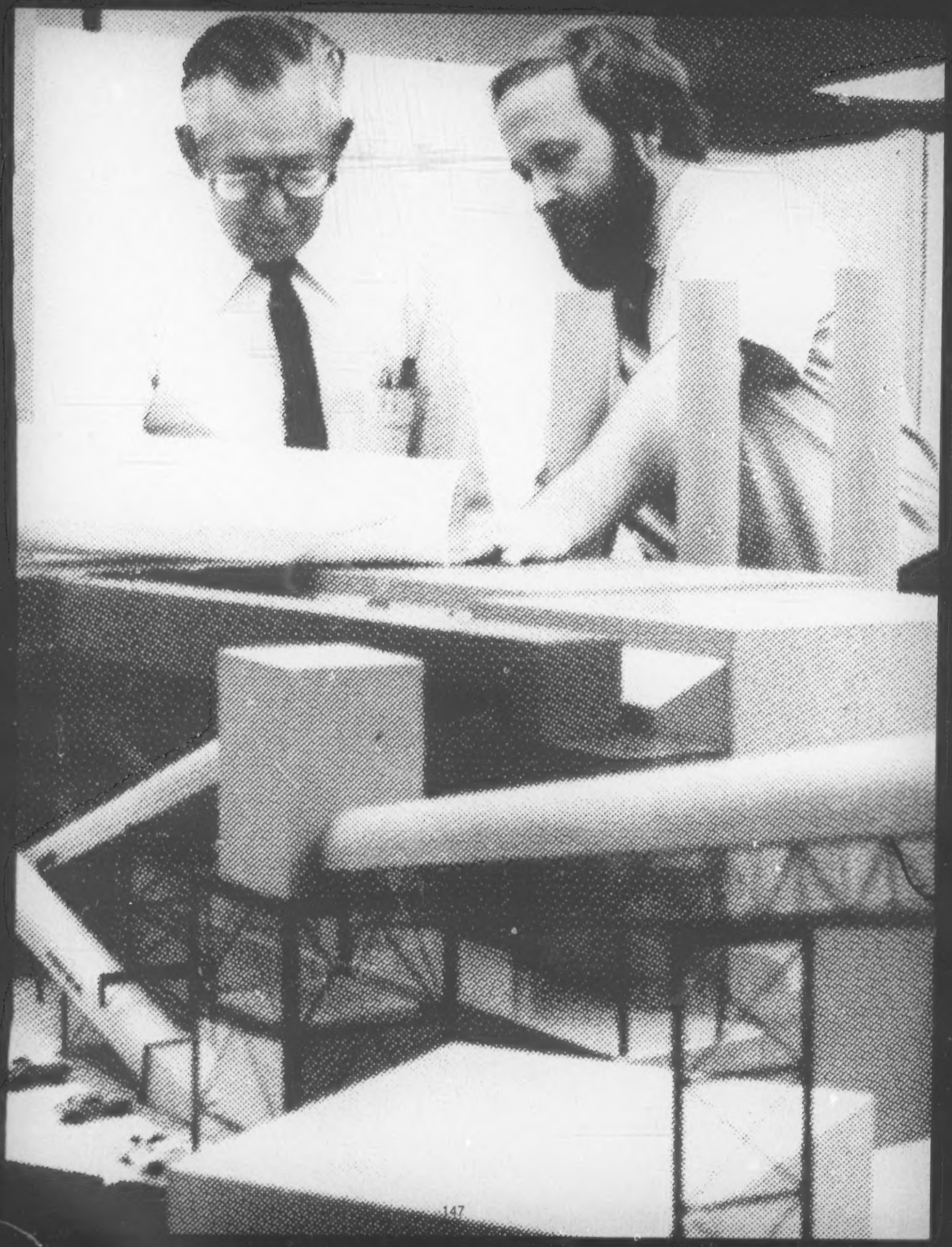
Western Systems Coordinating Council
Listing of Generating Unit Additions Planned for 1982-1991

TABLE 26

Continued

WSCC-Canada

STATE LOCATION	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
	TAUC	KEEPHILLS 1	ST	377	SUB	02/83	U	
	BCHA	REVELSTOKE 1-2	HY	988	WAT	12/83	U	
	TAUC	KEEPHILLS 2	ST	377	SUB	02/84	U	
	BCHA	REVELSTOKE 3	HY	450	WAT	03/84	U	
	BCHA	REVELSTOKE 4	HY	450	WAT	09/84	U	
	TAUC	SHEERNESS 1	ST	366	SUB	04/85	U	J
	TAUC	KEEPHILLS 3	ST	360	SUB	06/85	P	
	BCHA	FALLS RIVER	HY	22	WAT	08/85	U	
	TAUC	SHEERNESS 2	ST	366	SUB	04/86	U	J
	TAUC	KEEPHILLS 4	ST	360	SUB	06/86	P	
	EDMP	GENESEE 1	ST	360	SUB	09/86	P	
	WKPL	BRILLIANT EXP (2)	HY	114	WAT	10/86	P	
	EDMP	GENESEE 2	ST	360	SUB	05/87	P	
	WKPL	WANETA EXP (2)	HY	185	WAT	10/87	P	
	BCHA	KEEHLEYSIDE 1-2	HY	72	WAT	10/88	P	
	BCHA	PEACE C 1-2	HY	325	WAT	10/88	P	
	BCHA	KEEHLEYSIDE 3-4	HY	72	WAT	01/89	P	
	BCHA	PEACE C 3	HY	162	WAT	01/89	P	
	BCHA	PEACE C 4	HY	162	WAT	04/89	P	
	BCHA	PEACE C 5	HY	162	WAT	07/89	P	
	BCHA	HAT CREEK 1	ST	500	SUB	08/89	P	
	BCHA	PEACE C 6	HY	162	WAT	10/89	P	
	BCHA	HAT CREEK 2	ST	500	SUB	08/90	P	
	TAUC	NEW STEAM 1	ST	360	SUB	07/91	P	
	BCHA	MURPHY CREEK 1-2	HY	86	WAT	10/91	P	



Planned Additions of Generating Units: Coal Units

The coal-fired generating unit additions planned for 1982-1991 are presented for NERC in the following table. These units are listed as reported by the Regional Reliability Councils of NERC to the U.S. Department of Energy in their April 1, 1982 (EP-411) Reports.

The following table shows that between 1982 and 1991, U.S. utilities are planning to add 174 new coal-fired units, down from the 198 coal-fired units they were planning last year to add during the 1981-1990 period.

The codes and conventions used throughout this table are the same as described in the introduction to Table 26.

Coal-Fired Generating Units Scheduled for Service 1982-1991

(contiguous U.S.)

CONSTRUCTION STATUS	No. of Units	Total Summer MW Capability	Average Unit Size
PLANNED, BUT NOT UNDER CONSTRUCTION	93 units	47,031 MW	506 MW
UNDER CONSTRUCTION, LESS THAN 50% COMPLETE	49 units	27,309 MW	557 MW
UNDER CONSTRUCTION, MORE THAN 50% COMPLETE	32 units	16,692 MW	522 MW
TOTAL	174 units	91,032 MW	523 MW

North American Electric Reliability Council
Listing of Coal Unit Additions Planned for 1982-1991

TABLE 27

REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
SPP/GRP B	OK	WEFA	HUGO 1	ST	376	SUB	04/82	V	
WSCC/RMPA	WY	BEPC	LARAMIE RIVER STATION 2	ST	550	SUB	04/82	V	J
SPP/GRP A	LA	GUSU	NELSON 6	ST	540	SUB	05/82	V	J
WSCC/AZ-NM	NM	PNM	SAN JUAN 4	ST	472	BIT	05/82	V	
ECAR	KY	LG&E	MILL CREEK 4	ST	495	COL	06/82	V	
SPP/GRP A	LA	CELE	RODEMACHER 2	ST	530	BIT	06/82	V	J
SPP/GRP C	MO	ASEC	THOMAS HILL 3	ST	630	BIT	06/82	V	
SPP/GRP B	TX	SWPS	TOLK 1	ST	506	COL	06/82	V	
SERC/FLA	FL	LALW	MCINTOSH 3	ST	334	BIT	07/82	V	J
ECAR	IN	ME	HERON 1	ST	460	COL	07/82	V	
ECAR	IN	PSI	GIBSON 5	ST	620	COL	10/82	V	
ECAR	OH	OP&L	KILLEN STATION 2	ST	600	COL	10/82	V	J
MAIN/WUMS	MI	MARQ	SHIRAS 3	ST	40	COL	10/82	V	
MAPP-U.S.	WY	BEPC	LARAMIE RIVER 3	ST	550	SUB	11/82	V	J
MAPP-U.S.	IA	MPW	MUSCATINE 9	ST	150	BIT	11/82	V	
MAPP-CAN.		SPC	POPLAR RIVER 1	ST	280	LIG	11/82	V	
SERC/FLA	FL	FLPC	CRYSTAL RIVER 4	ST	640	BIT	12/82	V	
MAIN/SCILL	IL	CEIP	NEWTON 2	ST	565	COL	12/82	V	
SPP/GRP A	AR	MSUI	INDEPENDENCE 1	ST	816	SUB	01/83	V	J
WSCC-CAN.		TAUC	KEEPHILLS 1	ST	377	SUB	02/83	V	
SERC/VACAR	NC	CAPO	MAYO 1	ST	720	COL	03/83	V	
ERCOT	TX	HOLP	PARISH 8	ST	540	COL	05/83	V	
WSCC/CA-NV	NV	NEVP	REID GARDNER 4	ST	250	BIT	05/83	V	J
SPP/GRP A	LA	CAJN	BIG CAJUN 2, UNIT 3	ST	518	SUB	06/83	V	J
ERCOT	TX	TNPP	GIBBONS CREEK 1	ST	400	LIG	06/83	V	
WSCC/NWPP	UT	UPLC	HUNTER 3	ST	400	BIT	06/83	U	
SPP/GRP C	KS	KAPL	JEFFREY 3	ST	680	SUB	06/83	V	J
ECAR	IN	NIPS	SCHAHFER 17	ST	344	COL	06/83	U	
SERC/FLA	FL	SECI	SEMINOLE 1	ST	600	BIT	06/83	V	
ECAR	MI	CHLP	UNIT 3	ST	58	COL	06/83	U	
MAPP-U.S.	IA	IIGE	LOUISA 1	ST	650	SUB	07/83	V	J
SPP/GRP C	KS	SUNC	HOLCOMB 1	ST	280	COL	09/83	V	
WSCC/RMPA	CO	CUEA	CRAIG 3	ST	400	BIT	10/83	U	
MAPP-U.S.	ND	BEPC	ANTELOPE VALLEY 1	ST	416	LIG	11/83	V	
WSCC/NWPP	MT	MPC	COLSTRIP 3	ST	700	BIT	01/84	U	J
WSCC-CAN.		TAUC	KEEPHILLS 2	ST	377	SUB	02/84	U	
SERC/SOU	GA	GEPC	SCHERER 2	ST	808	BIT	02/84	V	J
WSCC/RMPA	CO	PRPA	RAWHIDE 1	ST	250	BIT	04/84	U	
MAAC	MD	BGE	BRANDON SHORES 1	ST	620	BIT	05/84	V	
SERC/VACAR	SC	SOCA	CROSS SITE UNIT 2	ST	450	BIT	05/84	U	
WSCC/AZ-NM	NM	PEGT	ESCALANTE 1	ST	210	BIT	06/84	U	
ECAR	MI	DECO	BELLE RIVER 1	ST	664	COL	07/84	U	
ECAR	KY	GREC	WILSON 1	ST	395	COL	07/84	U	
NPCC/ONT		ONHY	ATIKOKAN 1	ST	206	COL	10/84	V	
ECAR	KY	KU	GHENT 4	ST	500	COL	10/84	U	
MAIN/WUMS	WI	WIEP	PLEASANT PRAIRIE 2	ST	500	SUB	10/84	V	
WSCC/CA-NV	NV	SPP	VALMY 2	ST	250	BIT	10/84	U	J
SPP/GRP B	OK	OKGE	MUSKOGEE 6	ST	515	SUB	11/84	U	
NPCC/NY	NY	NEYE	SOMERSET	ST	625	BIT	11/84	U	
WSCC/NWPP	UT	DGTC	BONANZA 1	ST	400	BIT	12/84	U	
SERC/FLA	FL	FLPC	CRYSTAL RIVER 5	ST	640	BIT	12/84	U	
ECAR	IN	AEP	ROCKPORT 1	ST	1300	COL	12/84	U	
ECAR	IN	SIGE	BROWN 2	ST	250	COL	01/85	U	
SPP/GRP A	AR	MSUI	INDEPENDENCE 2	ST	816	SUB	01/85	U	J
SERC/FLA	FL	SECI	SEMINOLE 2	ST	600	BIT	01/85	U	
SPP/GRP B	TX	SOEP	PIRKEY 1	ST	640	LIG	02/85	U	
SERC/FLA	FL	TAEC	BIG BEND 4	ST	417	BIT	03/85	U	
MAIN/WUMS	WI	WIPL	EDGEWATER 5	ST	380	SUB	03/85	U	J
WSCC-CAN.		TAUC	SHEERNESS 1	ST	366	SUB	04/85	U	J
SERC/SOU	AL	ALAP	MILLER 2	ST	654	BIT	05/85	V	
WSCC/NWPP	UT	UPLC	HUNTER 4	ST	400	BIT	06/85	L	
WSCC-CAN.		TAUC	KEEPHILLS 3	ST	360	SUB	06/85	P	
ECAR	IN	NIPS	SCHAHFER 18	ST	344	COL	06/85	U	
WSCC/AZ-NM	AZ	TEP	SPRINGERVILLE 1	ST	350	SUB	06/85	U	

North American Electric Reliability Council
Listing of Coal Unit Additions Planned for 1982-1991

TABLE 27

REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
SPP/GRP B	TX	SWPS	TOLK 2	ST	500	COL	06/85	L	
ECAR	KY	LG&E	TRIMBLE COUNTY 1	ST	495	COL	06/85	U	
ECAR	MI	DECO	BELLE RIVER 2	ST	664	COL	07/85	U	J
WSCC/NWPP	MT	MPC	COLSTRIP 4	ST	700	BIT	07/85	U	
MAPP-U.S.	ND	BEPC	ANTELOPE VALLEY 2	ST	370	LIG	11/85	U	J
SERC/FLA	FL	JACO	ST. JOHNS RIVER 1	ST	550	BIT	12/85	L	
SPP/GRP B	OK	GRRD	GRDA 2	ST	490	COL	01/86	L	J
SPP/GRP A	LA	SOEP	DOLET HILLS 1	ST	640	LIG	02/86	U	
ERCOT	TX	HOLP	LIMESTONE 1	ST	700	LIG	04/86	U	
ECAR	IN	IP&L	PETERSBURG 4	ST	518	COL	04/86	U	J
WSCC-CAN.		TAUC	SHEERNESS 2	ST	366	SUB	04/86	U	J
WSCC/CA-NV	NV	NEVP	ALLEN 1	ST	500	BIT	05/86	P	J
MAPP-U.S.	MN	NSP	SHERBURNE CC 3	ST	800	SUB	05/86	L	
WSCC-CAN.		TAUC	KEEPHILLS 4	ST	360	SUB	06/86	P	J
WSCC/CA-NV	UT	LDWP	INTERMOUNTAIN 1	ST	750	BIT	07/86	L	
WSCC-CAN.		EDMP	GENESEE 1	ST	360	SUB	09/86	P	
SPP/GRP A	LA	CAJN	OXBOW 1	ST	512	LIG	11/86	L	J
SERC/FLA	FL	ORLA	STANTON 1	ST	415	BIT	11/86	L	
MAIN/WUMS	WI	WIPS	COGENERATION PLANT	ST	10	COL	12/86	P	J
ERCOT	TX	WETU	OKLAUNION 1	ST	640*	COL	12/86	P	
ECAR	IN	AEP	ROCKPORT 2	ST	1300	COL	12/86	U	J
SERC/SOU	GA	GEPC	SCHERER 3	ST	800	BIT	02/87	U	
MAIN/SCILL	IL	CEIL	DUCK CREEK 2	ST	400	COL	03/87	P	
ECAR	MI	LBWL	ERICKSON 2	ST	150	COL	03/87	P	
NPCC/NY	NY	POAS	700 MW FOSSIL	ST	700	BIT	04/87	P	
ERCOT	TX	HOLP	LIMESTONE 2	ST	700	LIG	04/87	U	
WSCC/RMPA	CO	PSC	SOUTHEAST 1	ST	485	BIT	04/87	P	J
WSCC/CA-NV	NV	NEVP	ALLEN 2	ST	500	BIT	05/87	P	J
WSCC-CAN.		EDMP	GENESEE 2	ST	360	SUB	05/87	P	
MAIN/SCILL	IL	SYPC	SOYLAND 1	ST	450	COL	05/87	P	
WSCC/AZ-NM	AZ	TEP	SPRINGERVILLE 2	ST	350	SUB	06/87	U	
SERC/FLA	FL	JACO	ST. JOHNS RIVER 2	ST	550	BIT	06/87	L	J
WSCC/CA-NV	UT	LDWP	INTERMOUNTAIN 2	ST	750	BIT	07/87	L	J
ECAR	KY	EKPC	SMITH 1	ST	600	COL	10/87	U	
WSCC/RMPA	CO	CUEA	SOUTHWEST 1	ST	400	BIT	10/87	P	
MAAC	MD	BGE	BRANDON SHORES 2	ST	620	BIT	01/88	U	
ERCOT	TX	TEPL	TWIN OAK 1	ST	562	LIG	02/88	U	
ECAR	KY	CG&E	EAST BEND 1	ST	600	COL	04/88	U	J
ERCOT	TX	HOLP	MALAKOFF 1	ST	600	LIG	04/88	P	
WSCC/CA-NV	NV	NEVP	ALLEN 3	ST	500	BIT	05/88	P	J
MAPP-U.S.	MN	NSP	METRO 1	ST	60	SUB	05/88	L	
SERC/VACAR	SC	SOCA	CROSS SITE UNIT 1	ST	450	BIT	06/88	L	
ERCOT	TX	LOCR	F.P.P. 3	ST	480	LIG	06/88	P	
SERC/FLA	FL	SECI	TAYLOR 1	ST	600	BIT	06/88	L	
SPP/GRP C	MO	ASEC	UNDETERMINED	ST	630	BIT	06/88	P	
SPP/GRP A	LA	MSUI	WILTON 1	ST	800	COL	06/88	P	
WSCC/NWPP	WA	WWPC	CRESTON 1	ST	500	SUB	07/88	L	
WSCC/CA-NV	UT	LDWP	INTERMOUNTAIN 3	ST	750	BIT	07/88	L	J
MAPP-U.S.	ND	OTP	SPIRITWOOD 1	ST	125	LIG	09/88	T	
WSCC/AZ-NM	NM	PEGT	ESCALANTE 2	ST	210	BIT	10/88	P	
MAPP-U.S.	ND	BEPC	ANTELOPE VALLEY 3	ST	446	LIG	11/88	L	
MAPP-U.S.	IA	IELP	GUTHRIE COUNTY 1	ST	650	COL	12/88	P	J
WSCC/NWPP	WY	PPL	WYODAK 2	ST	315	BIT	12/88	T	J
SERC/FLA	FL	FLPL	MARTIN 3	ST	780	BIT	**/89	P	
ERCOT	TX	TUCS	FOREST GROVE 1	ST	750	LIG	01/89	U	J
MAPP-CAN.		SPC	FUTURE FOSSIL 1	ST	200	LIG	01/89	P	
SERC/SOU	GA	GEPC	SCHERER 4	ST	800	BIT	02/89	U	J
ECAR	KY	KU	HANCOCK COUNTY 1	ST	650	COL	04/89	P	
ERCOT	TX	HOLP	MALAKOFF 2	ST	600	LIG	04/89	P	
WSCC/RMPA	CO	PSC	SOUTHEAST 2	ST	485	BIT	04/89	P	J

*175 MW of 640 MW Oklaunion capacity to participants in SPP Region.

**Month undetermined.

North American Electric Reliability Council
Listing of Coal Unit Additions Planned for 1982-1991

TABLE 27

REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
SERC/SOU	AL	ALAP	MILLER 3	ST	654	BIT	05/89	U	
SERC/VACAR	SC	SOCG	UNDETERMINED 1	ST	550	COL	05/89	P	
SPP/GRP B	TX	SWPS	SPS 6	ST	600	COL	06/89	P	
ERCOT	TX	TNPP	UNDESIGNATED	ST	400	LIG	06/89	P	
SPP/GRP C	MO	EMDE	UNKNOWN	ST	90	COL	06/89	P	J
SPP/GRP B	OK	OKGE	UNKNOWN	ST	500	SUB	06/89	P	
WSCC/CA-NV	NV	LDWP	WHITE PINE 1	ST	750	BIT	06/89	P	J
WSCC/CA-NV	UT	LDWP	INTERMOUNTAIN 4	ST	750	BIT	07/89	L	J
WSCC/NWPP	MT	MPC	THERMAL PLANT	ST	330	BIT	07/89	P	
WSCC-CAN.		BCHA	HAT CREEK 1	ST	500	SUB	08/89	P	
ECAR	PA	APS	LOWER ARMSTRONG 1	ST	630	COL	09/89	P	
WSCC/RMPA	CO	CUEA	SOUTHWEST 2	ST	400	BIT	10/89	P	
MPCC/NE	NE	CEMP	SEARS ISLAND	ST	560	COL	11/89	P	
SERC/FLA	FL	FLPL	MARTIN 4	ST	700	BIT	**/90	P	
WSCC/AZ-NM	AZ	AEPC	AEPCO 1	ST	275	SUB	01/90	P	J
SPP/GRP A	AR	MSUI	ALEC 1	ST	808	LIG	01/90	P	J
WSCC/NWPP	UT	DGT	BONANZA 2	ST	400	BIT	01/90	P	
ECAR	IN	SIGE	BROWN 3	ST	500	COL	01/90	P	
WSCC/NWPP	WA	WWPC	CRESTON 2	ST	500	SUB	01/90	L	
MAPP-CAN.		SPC	FUTURE FOSSIL 2	ST	280	LIG	01/90	P	
ERCOT	TX	TUCS	MARTIN LAKE 4	ST	750	LIG	01/90	U	J
SPP/GRP A	LA	GUSU	NELSON 5	ST	540	SUB	01/90	U	
SERC/FLA	FL	SECI	TAYLOR 2	ST	600	BIT	01/90	L	
ERCOT	TX	TUCS	UNASSIGNED	ST	750	LIG	01/90	P	J
ERCOT	TX	TEPL	TWIN OAK 2	ST	563	LIG	02/90	U	
MAIN/MO	MO	UMEC	UNDETERMINED	ST	575	COL	04/90	P	
SERC/SOU	MS	SOMI	UNNAMED LIGNITE	ST	250	LIG	04/90	P	
MAPP-U.S.	IA	IPS	NEAL 3	ST	400	SUB	05/90	P	J
WSCC/AZ-NM	NM	PNM	NEW MEXICO STATION	ST	490	BIT	05/90	P	J
WSCC/AZ-NM	TX	EPE	UNDETERMINED	ST	75	BIT	05/90	P	
SPP/GRP C	MO	MIPU	UNKNOWN	ST	100	BIT	05/90	P	J
MAAC	MD	DPL	VIENNA 9	ST	500	BIT	05/90	L	J
WSCC/AZ-NM	AZ	APS	CHOLLA 5	ST	340	SUB	06/90	U	
WSCC/CA-NV	NV	LDWP	WHITE PINE 2	ST	750	BIT	06/90	P	J
WSCC-CAN.		BCHA	H[illegible] CREEK 2	ST	500	SUB	08/90	P	
ECAR	IN	IP&L	PATRIOT 1	ST	650	COL	10/90	L	
MAIN/SCILL	IL	SOIP	MARION UNIT 5	ST	350	COL	11/90	P	
SPP/GRP A	LA	CAJN	OXBOW 2	ST	512	LIG	11/90	T	
SPP/GRP A	LA	MSUI	WILTON 2	ST	800	COL	11/90	P	
SPP/GRP B	OK	PSOK	COAL UNNAMED	ST	700	SUB	01/91	P	
SPP/GRP C	KA	KACY	NEARMAN STATION N-2	ST	310	COL	01/91	P	
ERCOT	TX	TUCS	UNASSIGNED	ST	650	COL	01/91	P	J
SERC/FLA	FL	TAEC	MACINNES 1	ST	400	BIT	03/91	P	
SERC/VACAR	NC	CAPO	MAYO 2	ST	720	COL	03/91	U	
ECAR	KY	CG&E	EAST BEND 3	ST	600	COL	04/91	P	
ERCOT	TX	SRAN	UNDESIGNATED	ST	500	LIG	04/91	P	
MAAC	PA	GPU	COAL 1	ST	625	BIT	05/91	P	
WSCC/AZ-NM	AZ	SRP	CORONADO 3	ST	350	SUB	05/91	P	
MAPP-U.S.	NE	NPPD	FOSSIL 3	ST	600	SUB	05/91	L	
SERC/SOU	AL	ALAP	MILLER 4	ST	654	BIT	05/91	U	
SERC/VACAR	SC	SOCG	UNDETERMINED 2	ST	550	COL	05/91	P	
MAPP-U.S.	WI	WSP	WISCONSIN COAL 1	ST	670	SUB	05/91	P	J
SERC/VACAR	SC	SOCA	CROSS SITE UNIT 3	ST	450	BIT	06/91	L	
WSCC/CA-NV	CA	SCE	IVANPAH 1	ST	500	BIT	06/91	P	J
WSCC/AZ-NM	AZ	TEP	SPRINGERVILLE 3	ST	350	SUB	06/91	T	
ERCOT	TX	TNPP	UNDESIGNATED	ST	200	LIG	06/91	P	
SPP/GRP C	MO	ASEC	UNDETERMINED	ST	630	BIT	06/91	P	
SPP/GRP B	OK	OKGE	UNKNOWN	ST	500	SUB	06/91	P	
WSCC-CAN.		TAUC	NEW STEAM 1	ST	360	SUB	07/91	P	
ECAR	PA	APS	LOWER ARMSTRONG 2	ST	630	COL	09/91	P	
MAAC	NJ	ACE	CUMBERLAND 1	ST	290	BIT	10/91	L	
SPP/GRP A	AR	MSUI	ALEC 2	ST	800	LIG	11/91	P	J
NPCC/NY	NY	NIMP	LAKE ERIE 1	ST	850	BIT	11/91	P	
MAPP-U.S.	MN	MPL	OLIVER COUNTY 1	ST	500	LIG	11/91	P	J
MAIN/WUMS	WI	WIEP	NEW 400 MW PLANT	ST	400	COL	12/91	P	

**Month undetermined.

Planned Additions of Generating Units: Nuclear Units

The nuclear generating unit additions planned for 1982-1991 are presented for NERC in the following table. These units are listed as reported by the Regional Reliability Councils of NERC to the U.S. Department of Energy in their April 1, 1982 (EP-411) Reports.

The following table shows that between 1982 and 1991, U.S. utilities are planning to add 61 new nuclear units, down from the 76 nuclear units they were planning last year to add during the 1981-1990 period.

The codes and conventions used throughout this table are the same as described in the introduction to Table 26.

Nuclear Generating Units Scheduled for Service 1982-1991

(contiguous U.S.)

CONSTRUCTION STATUS	No. of Units	Total Summer MW Capability	Average Unit Size
PLANNED, BUT NOT UNDER CONSTRUCTION	1 unit	1,275 MW	1,275 MW
UNDER CONSTRUCTION, LESS THAN 50% COMPLETE	18 units	20,439 MW	1,135 MW
UNDER CONSTRUCTION, MORE THAN 50% COMPLETE	42 units	44,618 MW	1,062 MW
TOTAL	61 units	66,332 MW	1,087 MW

North American Electric Reliability Council
Listing of Nuclear Unit Additions Planned for 1982-1991

TABLE 28

REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
MPCC/NB		NB	LEPREAU 1	ZZ	433	UR	84/82	V	
MAIN/CE	IL	CECO	LASALLE COUNTY 1	NB	1048	UR	86/82	V	
WSCC/CA-NV	CA	SCE	SAN ONOFRE 2	NP	1100	UR	86/82	V	J
WSCC/CA-NV	CA	PG&E	DIABLO CANYON 1	NP	1084	UR	88/82	V	
SERC/VACAR	SC	SOCG	SUMMER 1	NP	900	UR	11/82	V	J
SPP/GRP A	MS	MSUI	GRAND GULF 1	NB	1250	UR	82/83	V	J
MPCC/NY	NY	LOIL	SHOREHAM	NB	809	UR	83/83	V	
WSCC/CA-NV	CA	PG&E	DIABLO CANYON 2	NP	1106	UR	84/83	V	
MPCC/ONT		ONHY	PICKERING 8	ZZ	516	UR	84/83	V	
ECAR	OH	CG&E	ZIMMER 1	NB	792	UR	84/83	V	J
WSCC/AZ-NM	AZ	APS	PALO VERDE 1	NP	1270	UR	85/83	V	J
SERC/FLA	FL	FLPL	ST. LUCIE 2	NP	802	UR	85/83	V	J
MAAC	PA	PPL	SUSQUEHANNA 1	NB	1056	UR	85/83	V	J
SERC/VACAR	NC	DUPC	MCGUIRE 2	NP	1180	UR	86/83	V	
WSCC/CA-NV	CA	SCE	SAN ONOFRE 3	NP	1100	UR	87/83	V	J
SPP/GRP A	LA	MSUI	WATERFORD 3	NP	1104	UR	87/83	V	
MAIN/SCILL	IL	ILPC	CLINTON 1	NB	950	UR	88/83	V	J
MAIN/CE	IL	CECO	LASALLE COUNTY 2	NB	1048	UR	10/83	V	
ECAR	MI	DECO	ENRICO FERMI 2	NB	1094	UR	11/83	V	J
ECAR	MI	CP	MIDLAND 2	NP	783	UR	12/83	V	
MAIN/MO	MO	UNEC	CALLAWAY 1	NP	1120	UR	81/84	V	
MAIN/CE	IL	CECO	BYRON 1	NP	1120	UR	82/84	V	
WSCC/NWPP	WA	BPA	WNP 2	NB	1100	UR	82/84	V	
SERC/VACAR	SC	DUPC	CATAWBA 1	NP	1145	UR	83/84	V	
MPCC/NE	NH	PSNH	SEABROOK 1	NP	1150	UR	83/84	V	J
SERC/TVA	TN	TEVA	WATTS BAR 1	NP	1177	UR	83/84	V	
MPCC/ONT		ONHY	BRUCE 5	ZZ	750	UR	84/84	V	
MPCC/ONT		ONHY	PICKERING 6	ZZ	516	UR	84/84	V	
ERCOT	TX	HOLP	SOUTH TEXAS PROJECT 1	NP	1250	UR	84/84 a	U	J
WSCC/AZ-NM	AZ	APS	PALO VERDE 2	NP	1270	UR	85/84	U	J
ECAR	OH	CAPC	PERRY 1	NB	1179	UR	85/84	V	J
ERCOT	TX	TUCS	COMANCHE PEAK 1	NP	1150	UR	86/84	V	J
SPP/GRP C	KS	KAGE	WOLF CREEK 1	NP	1150	UR	86/84	V	J
MPCC/ONT		ONHY	BRUCE 6	ZZ	750	UR	87/84	V	
ECAR	MI	CP	MIDLAND 1	NP	505	UR	87/84	V	
MPCC/ONT		ONHY	PICKERING 7	ZZ	516	UR	88/84	V	
MAAC	PA	PPL	SUSQUEHANNA 2	NB	1056	UR	11/84	V	J
SERC/TVA	TN	TEVA	WATTS BAR 2	NP	1177	UR	81/85	V	
MAIN/CE	IL	CECO	BYRON 2	NP	1120	UR	82/85	V	
MPCC/ONT		ONHY	PICKERING 9	ZZ	516	UR	82/85	V	
MAAC	PA	PECO	LIMERICK 1	NB	1055	UR	84/85	V	
SERC/VACAR	SC	DUPC	CATAWBA 2	NP	1145	UR	89/85	V	
SERC/VACAR	NC	CAPO	HARRIS 1	NP	900	UR	09/85	V	
MAIN/CE	IL	CECO	BRAIDWOOD 1	NP	1090	UR	10/85	V	
ERCOT	TX	TUCS	COMANCHE PEAK 2	NP	1150	UR	12/85	V	J
SPP/GRP A	LA	GUSU	RIVER BEND 1	NB	940	UR	12/85	U	J
MPCC/ONT		ONHY	BRUCE 7	ZZ	756	UR	84/86	V	
ERCOT	TX	HOLP	SOUTH TEXAS PROJECT 2	NP	1250	UR	84/86 b	U	J
ECAR	PA	CAPC	BEAVER VALLEY 2	NP	820	UR	85/86	V	J
MPCC/NE	CT	NOEU	MILLSTONE 3	NP	1150	UR	85/86	U	

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Listing of Nuclear Unit Additions Planned for 1982-1991

TABLE 28

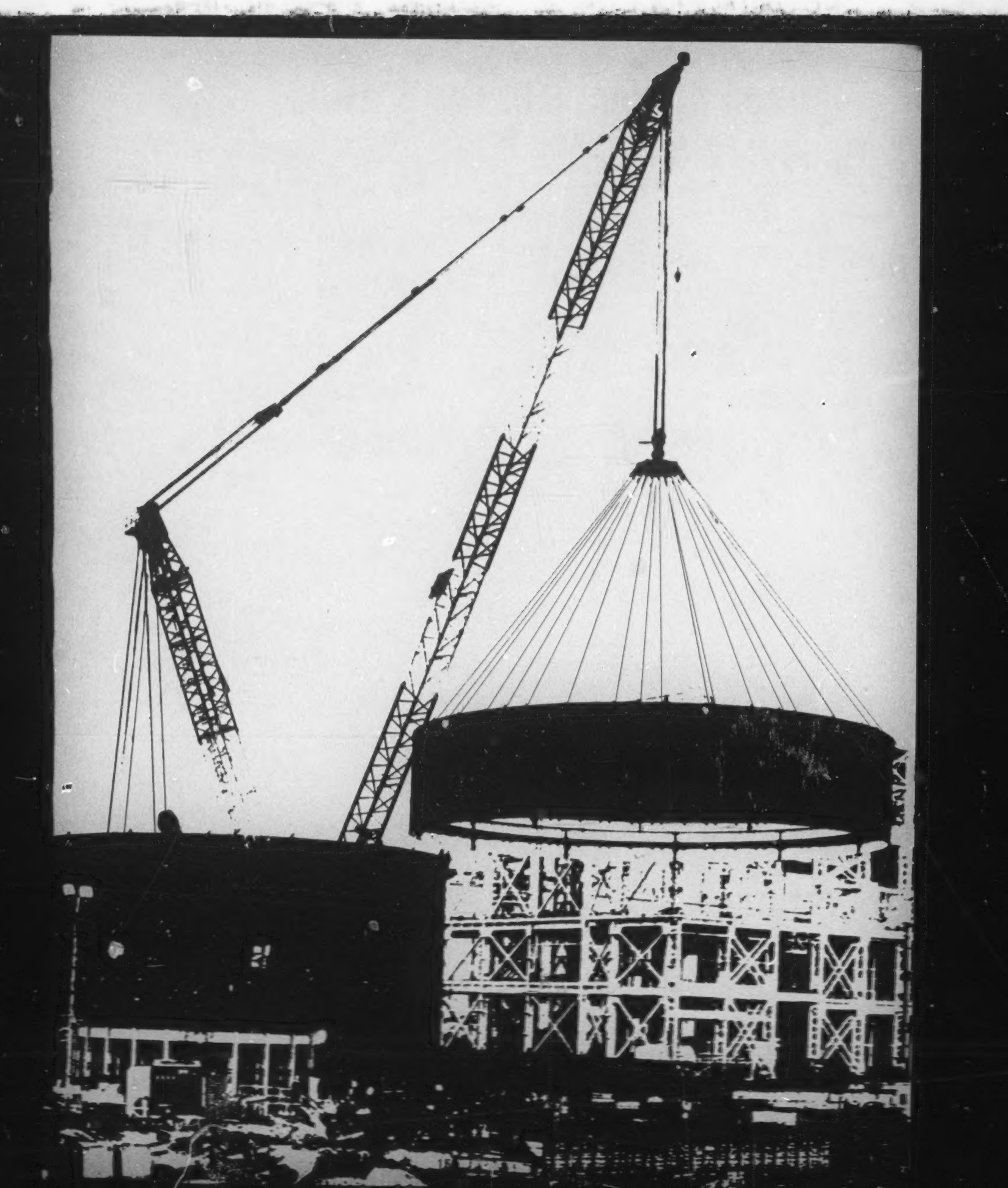
REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
WSCC/AZ-NM	AZ	APS	PALO VERDE 3	HP	1270	UR	05/86	U	J
NPCC/NE	NH	PSNH	SEABROOK 2	HP	1150	UR	06/86	U	J
WSCC/NWPP	WA	BPA	WNP 1	HP	1250	UR	06/86	U	
MAIN/CE	IL	CECO	BRAIDWOOD 2	HP	1090	UR	10/86	V	
NPCC/NY	NY	NIMP	NINE MILE PT 2	HB	1080	UR	11/86	U	J
MAAC	NJ	PSEG	HOPE CREEK 1	HB	1067	UR	12/86	U	J
ECAR	IN	PSI	MARBLE HILL 1	HP	1130	UR	12/86	U	J
WSCC/NWPP	WA	BPA	WNP 3	HP	1240	UR	12/86	U	J
NPCC/ONT		ONHY	BRUCE 8	ZZ	750	UR	01/87	V	
SERC/TVA	AL	TEVA	BELLEFONTE 1	HP	1213	UR	04/87	V	
SERC/SOU	GA	GEPC	VOGTLE 1	HP	1150	UR	04/87[c]	V	J
MAAC	PA	PECO	LIMERICK 2	HB	1055	UR	10/87	U	
ECAR	IN	PSI	MARBLE HILL 2	HP	1130	UR	12/87	U	J
SERC/TVA	AL	TEVA	BELLEFONTE 2	HP	1213	UR	02/88	V	
NPCC/ONT		ONHY	DARLINGTON 1	ZZ	881	UR	05/88	U	
ECAR	OH	CAPC	PERRY 2	HB	1179	UR	05/88	V	J
SERC/SOU	GA	GEPC	VOGTLE 2	HP	1150	UR	09/88[c]	U	J
SPP/GRP A	MS	MSUI	GRAND GULF 2	HB	1250	UR	11/88	U	J
NPCC/ONT		ONHY	DARLINGTON 2	ZZ	881	UR	02/89	U	
SERC/VACAR	NC	CAPO	HARRIS 2	HP	900	UR	03/89	U	
SERC/VACAR	VA	VIEP	NORTH ANNA 3	HP	907	UR	10/89	U	
NPCC/ONT		ONHY	DARLINGTON 3	ZZ	881	UR	11/89	U	
NPCC/ONT		ONHY	DARLINGTON 4	ZZ	881	UR	08/90	U	
SERC/TVA	MS	TEVA	YELLOW CREEK 1	HP	1285	UR	10/90[d]	U	
WSCC/NWPP	WA	PSPL	SKAGIT 1	HB	1275	UR	01/91	L	
SERC/TVA	TN	TEVA	HARTSVILLE 1	HB	1233	UR	04/91[d]	U	

a/ 1987 is now being assumed pending results of studies conducted by the Architect-Engineer.

b/ 1988 is now being assumed pending results of studies conducted by the Architect-Engineer.

c/ 75 MW of 1150 MW Vogtle unit capacity to participant in Florida Subregion.

d/ Deferred indefinitely.



Planned Additions of Generating Units: Renewable Energy Sources

The planned additions of generating capability using renewable energy sources, other than hydro, for 1982-1991 are presented in the following table. These units are listed as reported by the Regional Reliability Councils of NERC to the U.S. Department of Energy in their April 1, 1982 (EP-411) Reports. The codes and conventions used throughout this table are the same as described in the introduction to Table 26.

The following data indicate that 3,552 MW or 87.6% of all planned additions of generating capability using renewable energy sources over the next ten years are located in the WSCC Region. Of these planned additions, 3,287 MW or 81.1% of the U.S. total is located in the State of California.

Generating Capability Using Renewable Energy Sources Scheduled for Service 1982-1991

Unit Type	Fuel Type	No. of Units	Total Summer MW Capability	Average Unit Size
Geothermal	Geothermal Steam	37	2,301	62.2
Geothermal	Geothermal Hot Water	2	88	44.0
Solar	Sun	8	385	48.1
Wind Power	Wind	21	359	17.1
Steam	Peat	3	300	100.0
Cogeneration*	Wood and Wood Waste	9	211	23.4
Steam	Wood and Wood Waste	4	83	20.8
Steam	Refuse – Solid Waste	6	233	38.8
Steam	Others	3	95	31.7
		93	4,055	43.6

*Does not include cogeneration capacity using conventional fossil fuel sources.

North American Electric Reliability Council
Listing of Renewable Energy Source Unit Additions Planned for 1982-1991

TABLE 29

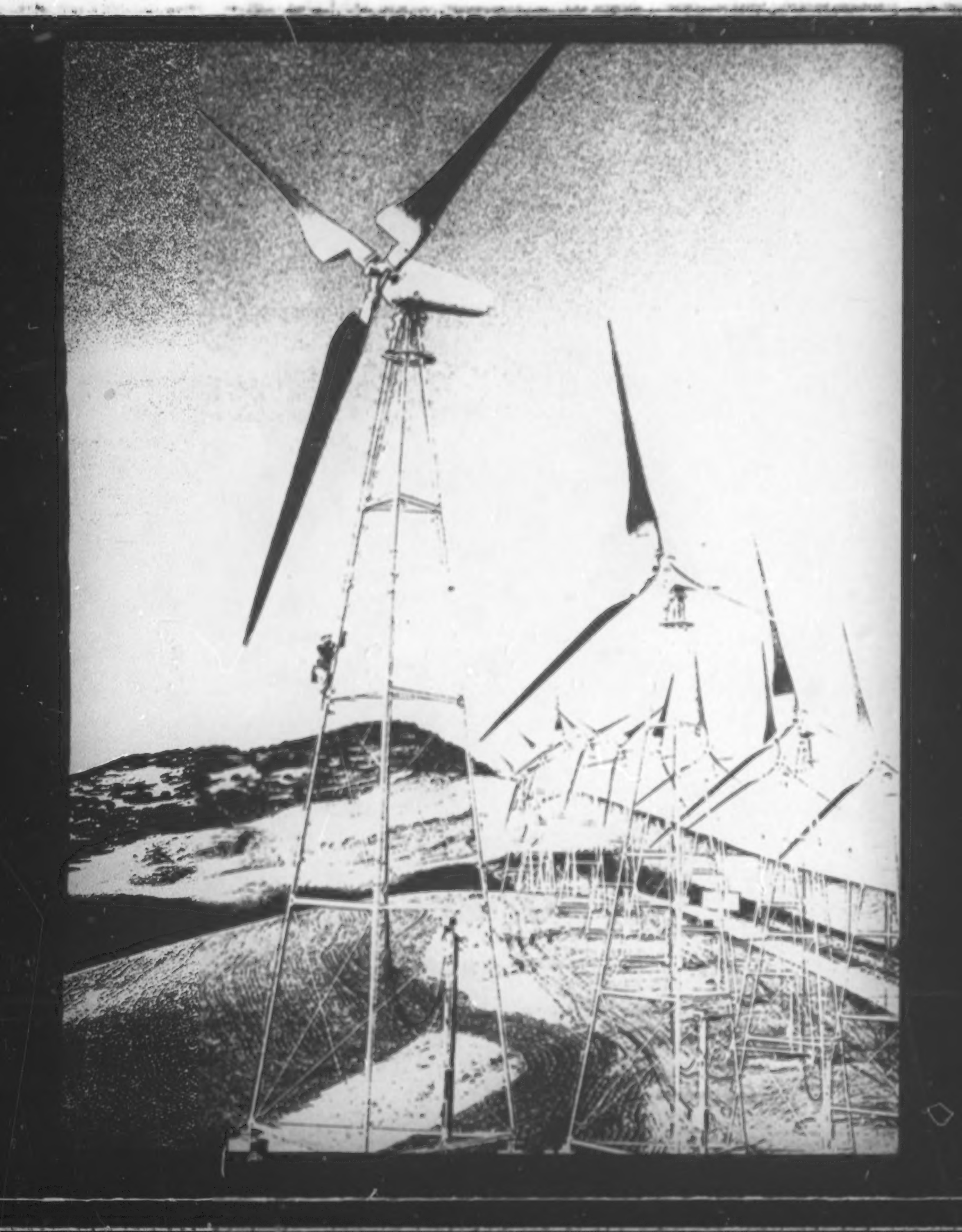
REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
WSCC/CA-HV	CA	PG&E	LOUSIANA PACIFIC-STANDARD	CG	3	WD	04/82	U	
WSCC/CA-HV	CA	PG&E	LOUISIANA PACIFIC	CG	25	WD	06/82	L	
WSCC/CA-HV	CA	PG&E	UB WIND POWER	WH	1	WND	06/82	P	
WSCC/CA-HV	CA	PG&E	SUP FARMING	ST	9	ZZ	07/82	P	
WSCC/CA-HV	CA	NCPA	GEOTHERMAL PROJ 1	GE	53	GST	09/82	U	
WSCC/CA-HV	CA	NCPA	GEOTHERMAL PROJ 2	GE	53	GST	09/82	U	
NPCC/NY	NY	LOIL	MITCHEL GARDENS 1 & 2	ST	32	REF	09/82	U	
WSCC/CA-HV	CA	PG&E	BIOMASS HUDSON LUMBER	ST	6	WD	10/82	P	
WSCC/CA-HV	CA	PG&E	GEYSERS 17	GE	110	GST	12/82	U	
WSCC/CA-HV	CA	PG&E	GEYSERS 18	GE	110	GST	05/83	U	
WSCC/AZ-NM	CA	IID	GEOTHERMAL 1	GE	50	GST	06/83	P	
WSCC/NWPP	ID	IPC	TAMARACH	CG	3	WD	06/83	L	
WSCC/CA-HV	CA	PG&E	UB WIND PWR	WH	4	WND	06/83	P	
WSCC/CA-HV	CA	SCE	WIND	WH	0	WND	08/83	P	
WSCC/NWPP	WA	WWPC	KETTLE FALLS	ST	42	WD	09/83	U	
WSCC/CA-HV	CA	SMUD	GEOTHERMAL 1	GE	55	GST	12/83	L	
WSCC/CA-HV	CA	PG&E	WIND FARMS	WH	1	WND	12/83	L	
WSCC/CA-HV	CA	SDGE	HILAND 1	GE	24	GST	01/84	P	
NPCC/NY	NY	POAS	PASNY SOLID WASTE	ST	10	REF	03/84	P	
WSCC/CA-HV	CA	CDWR	BOTTLE ROCK	GE	55	GST	06/84	U	
WSCC/CA-HV	CA	PG&E	GEOTHERMAL (OXY)	GE	50	GST	06/84	P	
WSCC/CA-HV	CA	SCE	GEOTHERMAL 1	GE	5	GST	06/84	P	
WSCC/CA-HV	CA	SCE	GEOTHERMAL 2	GE	9	GST	06/84	P	
WSCC/NWPP	UT	UPLC	MILFORD 1	GE	20	GST	06/84	L	
WSCC/CA-HV	CA	PG&E	WILD WELL GEOTHERMAL	GE	5	GST	06/84	P	
WSCC/CA-HV	CA	PG&E	WIND FARMS	WH	5	WND	06/84	P	
WSCC/CA-HV	CA	PG&E	WOOD WASTE PROJECT	ST	40	ZZ	06/84	L	
WSCC/CA-HV	CA	SCE	WIND	WH	16	WND	08/84	P	
WSCC/CA-HV	CA	PG&E	BIOMASS CPL	ST	50	ZZ	10/84	L	
WSCC/CA-HV	CA	SCE	GEOTHERMAL 3	GE	47	GST	11/84	P	
WSCC/CA-HV	CA	SDGE	HILAND 2	GE	49	GST	01/85	P	
NPCC/NY	NY	COEN	PEEKSKILL REFUSE	ST	31	REF	05/85	P	
WSCC/CA-HV	CA	PG&E	GEYSERS 16	GE	110	GST	06/85	L	
WSCC/CA-HV	CA	PG&E	WIND FARMS	WH	0	WND	06/85	P	
WSCC/CA-HV	CA	CDWR	SOUTH GEYSERS	GE	55	GST	07/85	T	
WSCC/CA-HV	CA	SCE	WIND	WH	16	WND	08/85	P	
WSCC/CA-HV	CA	PG&E	SOLID WASTE RECOVERY SF	ST	40	REF	10/85	L	
WSCC/RMPA	WY	USLM	WIND FARM	WH	100	WND	12/85	P	
WSCC/CA-HV	CA	PG&E	GEYSERS 20	GE	110	GST	03/86	P	
WSCC/AZ-NM	CA	IID	GEOTHERMAL 2	GE	50	GST	06/86	P	
WSCC/CA-HV	CA	SCE	SOLAR	SO	*	SUN	06/86	P	
WSCC/CA-HV	CA	SCE	WIND	WH	20	WND	06/86	P	
WSCC/CA-HV	CA	PG&E	WIND FARMS	WH	5	WND	06/86	P	
WSCC/CA-HV	CA	CDWR	HONEY LAKE HYDRID	CG	55	WD	12/86	P	
WSCC/CA-HV	CA	SMUD	GEOTHERMAL 2	GE	55	GST	01/87	P	
WSCC/CA-HV	CA	SCE	GEOTHERMAL	GE	52	GST	06/87	P	
WSCC/CA-HV	CA	SCE	GEOTHERMAL	GE	52	GST	06/87	P	
WSCC/CA-HV	HV	SPP	GEOTHERMAL 1	GE	50	GST	06/87	P	
WSCC/CA-HV	HV	SPP	GEOTHERMAL 2	GE	50	GST	06/87	P	
WSCC/CA-HV	CA	SCE	SOLAR	SO	10	SUN	06/87	P	

*Experimental unit: output undetermined.

North American Electric Reliability Council
Listing of Renewable Energy Source Unit Additions Planned for 1982-1991

TABLE 29

REGION/ SUBREGION	STATE LOC.	UTILITY SYSTEM	UNIT NAME	UNIT TYPE	SUMMER MW CAPABILITY	FUEL TYPE	PROJECTED SERVICE DATE	CONSTRUCTION STATUS	JOINTLY OWNED
WSCC/CA-NV	CA	SCE	WIND	WM	20	WND	06/87	P	
WSCC/CA-NV	CA	PG&E	WIND FARMS	WM	12	WND	06/87	P	
WSCC/CA-NV	CA	SDGE	GEOTHERMAL 1	GE	37	GST	01/88	P	
WSCC/CA-NV	CA	SCE	GEOTHERMAL	GE	52	GST	06/88	P	
WSCC/AZ-NM	CA	IID	GEOTHERMAL 3	GE	50	GST	06/88	P	
WSCC/CA-NV	CA	PG&E	GEYSERS 19	GE	55	GST	06/88	P	
WSCC/CA-NV	CA	PG&E	GEYSERS 22	GE	110	GST	06/88	P	
NPCC/NY	NY	POAS	PASNY SOLID WASTE	ST	80	REF	06/88	P	
NPCC/NY	NY	POAS	PASNY SOLID WASTE	ST	20	REF	06/88	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	20	SUN	06/88	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	5	SUN	06/88	P	
WSCC/CA-NV	CA	SCE	WIND	WM	14	WND	06/88	P	
WSCC/CA-NV	CA	SCE	WIND	WM	20	WND	06/88	P	
WSCC/CA-NV	CA	PG&E	WIND FARMS	WM	14	WND	06/88	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	100	SUN	08/88	P	
WSCC/CA-NV	CA	LDWP	H. BRAWLEY 2	GE	44	ZZ	10/88	P	
SERC/FLA	FL	SECI	PEAT 1	ST	100	PEA	10/88	P	
WSCC/CA-NV	CA	PG&E	GEYSERS 21	GE	110	GST	12/88	P	
WSCC/CA-NV	CA	PG&E	GENERIC BIOMASS	ST	25	WD	06/89	P	
WSCC/CA-NV	CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/89	P	
WSCC/CA-NV	CA	SCE	GEOTHERMAL	GE	52	GST	06/89	P	
WSCC/CA-NV	CA	PG&E	GEYSERS 23	GE	110	GST	06/89	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	50	SUN	06/89	P	
WSCC/CA-NV	CA	SCE	WIND	WM	20	WND	06/89	P	
WSCC/CA-NV	CA	PG&E	WIND FARMS	WM	12	WND	06/89	P	
WSCC/CA-NV	CA	LDWP	H. BRAWLEY 3	GE	44	ZZ	10/89	P	
SERC/FLA	FL	SECI	PEAT 2	ST	100	PEA	10/89	P	
WSCC/CA-NV	CA	PG&E	HOT WATER GEOTHERMAL	GE	50	GST	01/90	P	
WSCC/CA-NV	CA	PG&E	GENERIC BIOMASS	CG	25	WD	06/90	P	
WSCC/CA-NV	CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/90	P	
WSCC/CA-NV	CA	SCE	GEOTHERMAL	GE	156	GST	06/90	P	
WSCC/AZ-NM	CA	IID	GEOTHERMAL 4	GE	50	GST	06/90	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	100	SUN	06/90	P	
WSCC/CA-NV	CA	SCE	WIND	WM	20	WND	06/90	P	
WSCC/CA-NV	CA	PG&E	WIND FARMS	WM	9	WND	06/90	P	
SERC/FLA	FL	SECI	PEAT 3	ST	100	PEA	10/90	P	
MAIN/WUMS	WI	WIPS	WOOD PLANT	ST	10	WD	12/90	P	
WSCC/CA-NV	CA	PG&E	HOT WATER GEOTHERMAL	GE	50	GST	01/91	P	
WSCC/CA-NV	CA	PG&E	GENERIC BIOMASS	CG	25	WD	06/91	P	
WSCC/CA-NV	CA	PG&E	GENERIC COGENERATION	CG	25	WD	06/91	P	
WSCC/CA-NV	CA	PG&E	GEYSERS 24	GE	110	GST	06/91	P	
WSCC/CA-NV	CA	SCE	SOLAR	SO	100	SUN	06/91	P	
WSCC/CA-NV	CA	SCE	WIND	WM	30	WND	06/91	P	



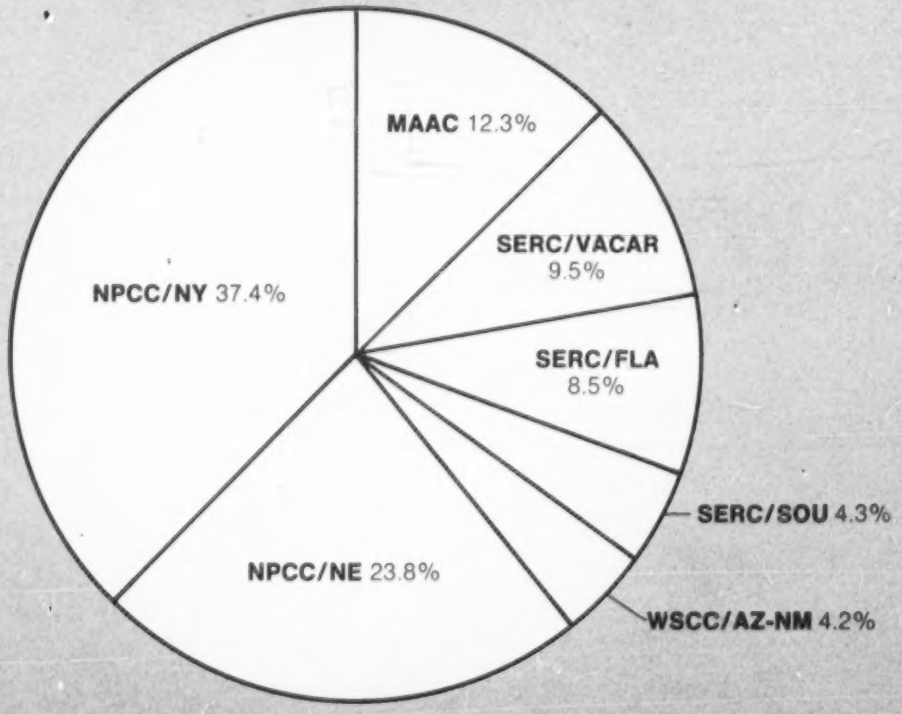
Planned Conversions of Units to Coal-Firing

The conversions of oil-burning generating units to coal-firing, scheduled for 1982-1991, are presented in the following table. Four NERC Regions show planned conversions for this period, totaling 9,976 MW.

The data indicate that 37.4% of all capacity planned for conversion is located in New York State alone. New England follows with 23.8% of the total. The NPCC Region alone accounts for such a large percentage (61.2%) of total U.S. conversions because most of these units targeted for fuel change in this region were designed to burn coal originally. NPCC is showing 6,102 MW scheduled for conversion.

The total capacity planned for conversion, presently burning #6 fuel oil, is up 18.4% from the 8,424 MW projected last year.

1982-1991 NERC
Oil-To-Coal Conversions



(9,976 MW)

North American Electric Reliability Council
Listing of Unit Conversions to Coal-Firing Planned for 1982-1991

TABLE 30

REGION SUBREGION	STATE	UTILITY SYSTEM	UNIT NAME	FORMER FUEL	SUMMER CAPABILITY BEFORE CONVERSION	REMOVAL DATE	RETURN DATE	SUMMER CAPABILITY AFTER CONVERSION
MAAC	NJ	PSEG	BURLINGTON 7	FO6	180	09/86	11/86	175
	NJ	AECO	DEEPWATER 6	FO6	80	12/82	12/82	80
	MD	BGCO	CRANE 1	FO6	192	04/83	07/83	192
	MD	BGCO	CRANE 2	FO6	192	02/83	05/83	192
	NJ	AECO	DEEPWATER 7	FO6	24	04/82	04/82	24
	NJ	AECO	DEEPWATER 5	FO6	24	06/82	06/82	24
	DE	DPL	EDGE MOOR 4	FO6	167	09/82	09/82	152
	DE	DPL	EDGE MOOR 3	FO6	82	04/83	04/83	80
	NJ	PSEG	BERGEN 2	FO6	283	12/90	12/90	277
NPCC/New York	NY	COEN	ARTHUR KILL 2	FO6	335	04/85	07/85	335
	NY	COEN	ARTHUR KILL 3	FO6	491	08/84	11/84	491
	NY	COEN	RAVENSWOOD 3	FO6	928	06/82	08/82	928
	NY	ORRU	LOVETT 4	FO6	196	06/84	07/84	191
	NY	ORRU	LOVETT 5	FO6	202	01/84	04/84	196
	NY	CEHG	DANSKAMMER 3	FO6	126	06/86	09/86	131
	NY	CEHG	DANSKAMMER 4	FO6	226	06/88	09/88	237
	NY	NIMP	ALBANY 1	FO6	100	07/85	01/86	100
	NY	NIMP	ALBANY 2	FO6	100	08/85	01/86	100
	NY	NIMP	ALBANY 3	FO6	100	10/85	01/86	100
	NY	NIMP	ALBANY 4	FO6	100	11/85	01/86	100
	NY	LOIL	PT. JEFFERSON 3	FO6	190	07/87	01/88	186
	NY	LOIL	PT. JEFFERSON 4	FO6	190	07/88	01/89	186
	NY	LOIL	BARRETT 1	FO6	190	07/88	01/89	186
	NY	LOIL	BARRETT 2	FO6	190	07/89	01/90	186
	NY	ORRU	LOVETT 3	FO6	63	02/88	05/88	63
NPCC/New England [a]	MA	NEES	BRAYTON POINT 3	FO6	642	N.A.	02/82	642
	CT	NOEU	DEVON 7	FO6	107	N.A.	**/86	105
	CT	NOEU	DEVON 8	FO6	107	N.A.	**/86	105
	ME	CEMP	MASON 3	FO6	36	N.A.	**/84	35
	ME	CEMP	MASON 4	FO6	35	N.A.	**/84	35
	ME	CEMP	MASON 5	FO6	36	N.A.	**/84	35
	CT	NOEU	NORWALK HARBOR 2	FO6	171	N.A.	**/85	169
	MA	NEES	SALEM HARBOR 1	FO6	84	03/82	05/82	84
	MA	NEES	SALEM HARBOR 2	FO6	83	04/82	05/82	83
	MA	NEES	SALEM HARBOR 3	FO6	151	02/82	03/82	150
	NH	PSNH	SCHILLER 4	FO6	48	N.A.	**/84	44
	NH	PSNH	SCHILLER 5	FO6	51	N.A.	**/84	47
	NH	PSNH	SCHILLER 6	FO6	52	N.A.	**/84	48
	RI	NEES	SOUTH STREET 12	FO6	98	N.A.	N.A.	98
	MA	NOEU	WEST SPRINGFIELD 1	FO6	51	N.A.	**/86	51
	MA	NOEU	WEST SPRINGFIELD 2	FO6	51	N.A.	**/86	51
	MA	NOEU	WEST SPRINGFIELD 3	FO6	107	N.A.	**/85	106
	CT	NOEU	NORWALK HARBOR 1	FO6	162	N.A.	**/85	158
	ME	CEMP	YARMOUTH 1	FO6	54	N.A.	**/86	49
	ME	CEMP	YARMOUTH 2	FO6	54	N.A.	**/86	49
	MA	EUAS	SOMERSET 5	FO6	73	10/82	11/82	72
	MA	EUAS	SOMERSET 6	FO6	122	09/82	11/82	119
SERC/Florida	FL	TAEC	GANNON 4	FO6	169	05/83	09/83	169

North American Electric Reliability Council
Listing of Unit Conversions to Coal-Firing Planned for 1982-1991

TABLE 30

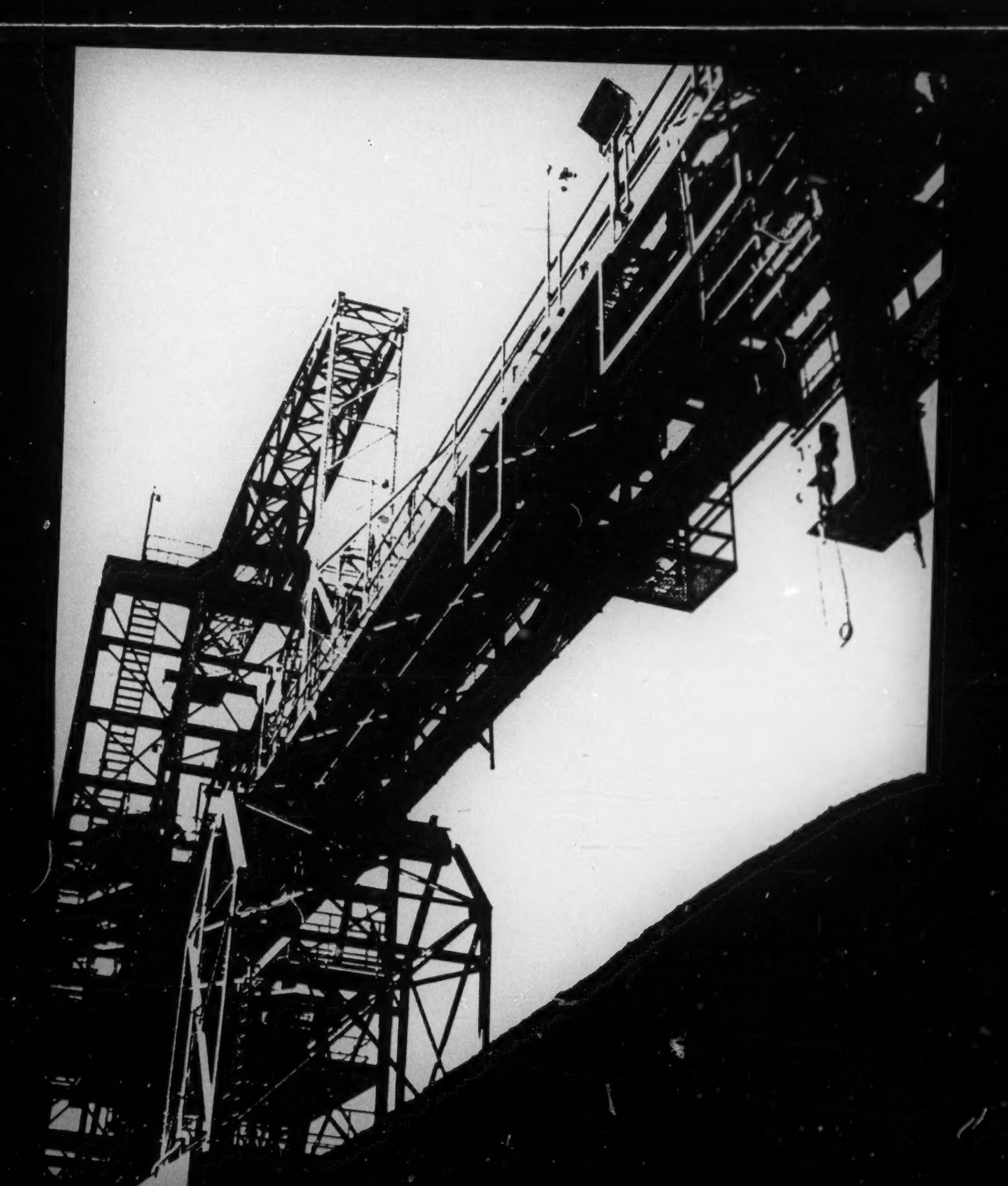
REGION/ SUBREGION	STATE	UTILITY SYSTEM	UNIT NAME	FORMER FUEL	SUMMER CAPABILITY BEFORE CONVERSION	REMOVAL DATE	RETURN DATE	SUMMER CAPABILITY AFTER CONVERSION
SERC/Florida	FL	TAEC	GANNON 3	FO6	150	02/84	05/84	150
	FL	TAEC	GANNON 2	FO6	108	02/85	05/85	108
	FL	TAEC	GANNON 1	FO6	103	09/85	12/85	103
	FL	FLPC	BARTOW 2	FO6	117	01/84	09/85	105
	FL	FLPC	BARTOW 3	FO6	205	01/84	09/85	184
SERC/Southern	GA	SAEP	EFFINGHAM 1	FO6	163	03/82	05/82	163
	GA	SAEP	PORT WENTWORTH 4	FO6	111	N.A.	04/85	111
	GA	SAEP	EFFINGHAM 2	FO6	159	03/82	05/82	159
SERC/VACAR	VA	VIEP	PORTSMOUTH 3	FO6	162	04/82	06/82	162
	VA	VIEP	YORKTOWN 1	FO6	166	09/84	11/84	166
	VA	VIEP	YORKTOWN 2	FO6	170	11/84	02/85	170
	VA	VIEP	CHESTERFIELD 3	FO6	100	09/83	11/83	100
	VA	VIEP	PORTSMOUTH 1	FO6	101	05/80[b]	01/86	101
	VA	VIEP	PORTSMOUTH 2	FO6	101	10/80[b]	01/86	101
	VA	VIEP	POSSUM POINT 1	FO6	74	10/80[b]	01/86	74
	VA	VIEP	POSSUM POINT 2	FO6	69	10/80[b]	01/86	69
WSCC/Arizona-New Mexico	AZ	TEP	IRVINGTON 1 & 2	FO6	162	10/86	05/87	100
	AZ	TEP	IRVINGTON 3	FO6	104	10/85	05/86	64
	AZ	TEP	IRVINGTON 4	FO6	156	10/84	05/85	96
					9976			9702

a/ Estimated reratings due to coal conversion have not been reflected in the report capability summaries.

b/ Reserve shutdown.

N.A./ Date not available.

**/ Month not available.



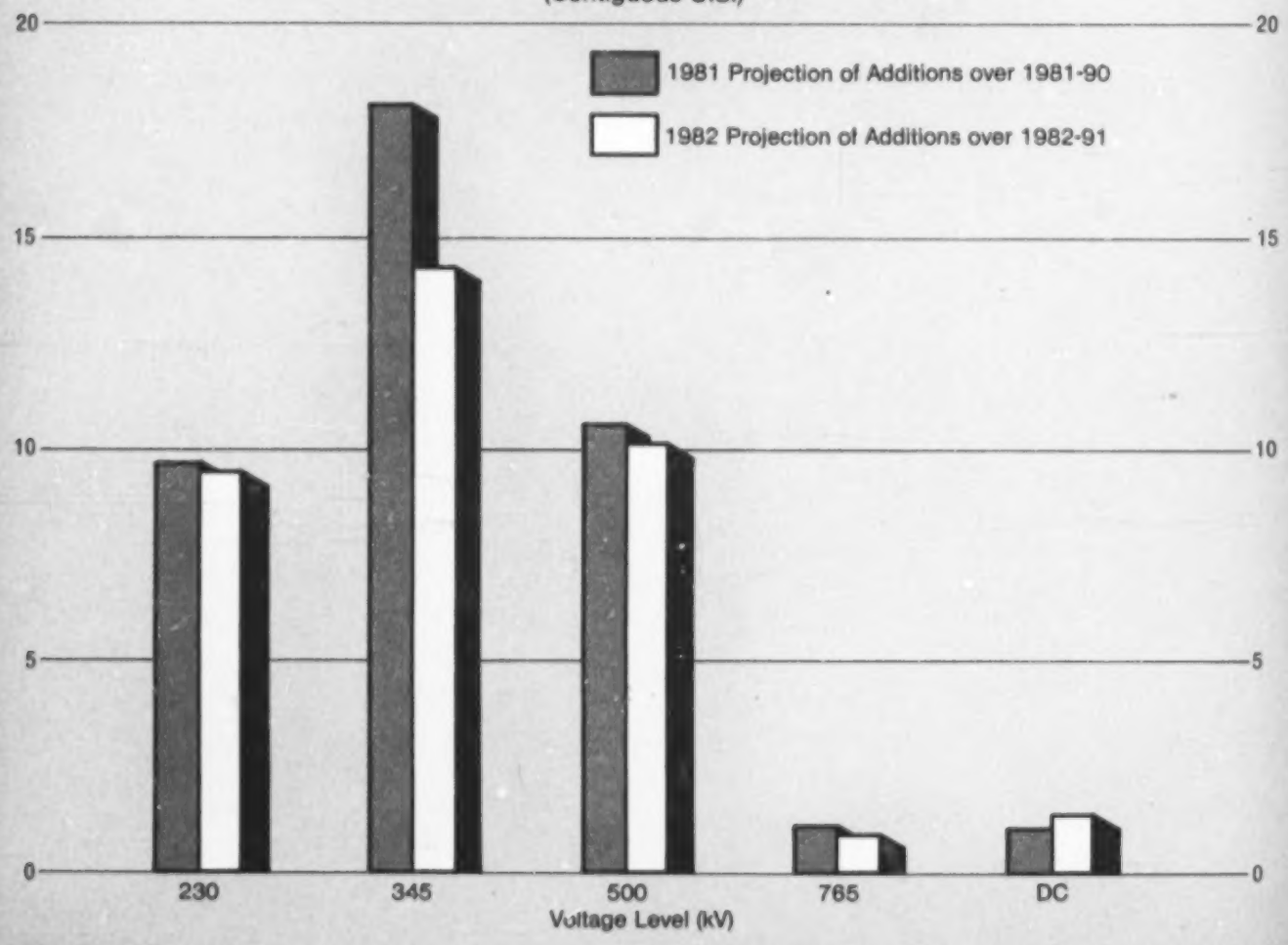
Planned Additions of Transmission Lines

The transmission line mileage existing as of Jan. 1, 1982 and the transmission line additions planned for 1982-1991 are presented for the NERC Regions and Subregions in the following tables.

Of the tabulated voltage levels, the 345 kV level shows the largest projected increase, with 14,397 miles of lines planned to be added in the U.S. over the 1982-1991 period.

The figure on this page compares the planned additions for the 1982-1991 period, as projected this year, with last year's projections for the 1981-1990 period.

Planned Transmission Line Additions
Comparison of 1981 and 1982 Ten-Year Projections
(Contiguous U.S.)



Regional: Transmission Lines — Miles

TABLE 31

EXISTING (1/1/82)

Region	VOLTAGE (kV) HVAC 230	345	500	765	HVDC [a] 500-600	800	900	1000
ECAR	935	11,287	796	1,536	0	0	0	0
ERCOT	0	5,089	0	0	0	0	0	0
MAAC	4,513	160	1,510	0	0	0	0	0
MAIN	259	4,772	0	90	0	0	0	0
MAPP—U.S.	6,431	4,330	341	0	463	436	0	0
NPCC—U.S.	11,534	3,657	5	251	0	0	0	0
SERC	17,254	2	5,172	0	0	0	0	0
SPP	3,657	3,514	1,529	0	0	0	0	0
WSCC—U.S.	29,182	7,833	8,881	0	0	844	0	0
NERC—U.S.	63,765	39,772	18,234	1,877	463	1,280	0	0
MAPP—Canada	3,859	0	130	0	582	0	557	0
NPCC—Canada	10,696	4,193	1,337	4,578	0	0	0	0
WSCC—Canada [b]	4,266	321	3,021	0	0	0	0	0
NERC—Total	82,586	44,286	22,722	6,455	1,045	1,280	557	0

Subregional: Transmission Lines — Miles

TABLE 31S

EXISTING (1/1/82)

Subregion	VOLTAGE (kV) HVAC 230	HVAC 345	HVAC 500	HVAC 765	HVDC[a] 500-600	HVDC[a] 800	HVDC[a] 900	HVDC[a] 1000
Cmwlth Ed.	0	2,295	0	90	0	0	0	0
Missouri	89	861	0	0	0	0	0	0
So. Cent. Ill.	47	754	0	0	0	0	0	0
WUMS	123	862	0	0	0	0	0	0
MAIN	259	4,772	0	90	0	0	0	0
New York	1,090	2,069	5	251[c]	0	0	0	0
New England	444	1,588	0	0	0	0	0	0
NPCC—U.S.	1,534	3,657	5	251	0	0	0	0
New Brunswick	318	461	0	0	0	0	0	0
Ontario	8,042	3	1,337	0	0	0	0	0
Québec	2,336	3,729[d]	0	4,578[e]	0	0	0	0
NPCC—Canada	10,696	4,193	1,337	4,578	0	0	0	0
Florida	3,773	0	441	0	0	0	0	0
Southern	5,738	0	1,114	0	0	0	0	0
TVA	30	2	2,167	0	0	0	0	0
VACAR	7,713	0	1,450	0	0	0	0	0
SERC	17,254	2	5,172	0	0	0	0	0
Group A	2,066	98	1,482	0	0	0	0	0
Group B	944	1,613	47	0	0	0	0	0
Group C	647	1,803	0	0	0	0	0	0
SPP	3,657	3,514	1,529	0	0	0	0	0
NWPP—U.S.	11,604	2,935	4,392	0	0	264	0	0
RMPA	3,619	316	0	0	0	0	0	0
AZ-NM	2,039	2,881	1,386	0	0	0	0	0
CA-NV	11,920	901	3,103	0	0	580	0	0
WSCC—U.S.	29,182	7,033	8,881	0	0	844	0	0

Regional: Transmission Lines — Miles

TABLE 32

UNDER CONSTRUCTION, COMMITTED OR PLANNED (1982-86)

Region	VOLTAGE (kV) HVAC 230	345	500	765	HVDC[a] 500-600	800	900	1000
ECAR	193	1,100	68	551	0	0	0	0
ERCOT	0	1,894	0	0	153	0	0	0
MAAC	380	10	208	0	36	0	0	0
MAIN	0	433	0	0	0	0	0	0
MAPP—U.S.	686	837	0	0	0	0	0	0
NPCC—U.S.	0	714	0	64	0	0	0	0
SERC	1,976	0	1,982	0	0	0	0	0
SPP	1,188	1,018	659	0	0	0	0	0
WSCC—U.S.	1,843	2,760	2,512	0	0	-844	0	1,363
NERC—U.S.	6,266	8,766	5,429	615	189	-844	0	1,363
MAPP—Canada	450	0	0	0	-582	0	0	582
NPCC—Canada	195	303	79	1,177	0	44	0	0
WSCC—Canada	1,400	0	759	0	0	0	0	0
NERC—Total	8,311	9,069	6,267	1,792	-393	-800	0	1,945

Subregional: Transmission Lines — Miles

TABLE 32S

UNDER CONSTRUCTION, COMMITTED OR PLANNED (1982-86)

VOLTAGE (kV)

Subregion	HVAC				HVDC [a]			
	230	345	500	765	500-600	800	900	1000
Cmwlth Ed.	0	151	0	0	0	0	0	0
Missouri	0	32	0	0	0	0	0	0
So. Cent. Ill.	0	195	0	0	0	0	0	0
WUMS	0	55	0	0	0	0	0	0
MAIN	0	433	0	0	0	0	0	0
New York	0	500	0	64	0	0	0	0
New England	0	214	0	0	0	0	0	0
NPCC—U.S.	0	714	0	64	0	0	0	0
New Brunswick	5	142	0	0	0	0	0	0
Ontario	65	2	79	0	0	0	0	0
Québec	125	159 [d]	0	1,177 [e]	0	44	0	0
NPCC—Canada	195	303	79	1,177	0	44	0	0
Florida	611	0	751	0	0	0	0	0
Southern	386	0	574	0	0	0	0	0
TVA	0	0	221	0	0	0	0	0
VACAR	979	0	436	0	0	0	0	0
SERC	1,976	0	1,982	0	0	0	0	0
Group A	575	11	604	0	0	0	0	0
Group B	400	465	0	0	0	0	0	0
Group C	213	542	55	0	0	0	0	0
SPP	1,188	1,018	659	0	0	0	0	0
NWPP—U.S.	414	536	1,367	0	0	-264	0	264
RMPA	627	1,036	0	0	0	0	0	0
AZ-NM	301	1,012	484	0	0	0	0	0
CA-NV	501	176	661	0	0	-580	0	1,099
WSCC—U.S.	1,843	2,760	2,512	0	0	-844	0	1,363

Regional: Transmission Lines — Miles

TABLE 33

UNDER CONSTRUCTION, COMMITTED OR PLANNED (1987-91)

VOLTAGE (kV)

Region	HVAC				HVDC[a]			
	230	345	500	765	500-600	800	900	1000
ECAR	34	356	349	361	0	0	0	0
ERCOT	0	1,752	0	0	0	0	0	0
MAAC	238	0	68	0	0	0	0	0
MAIN	0	318	0	0	0	0	0	0
MAPP—U.S.	123	853	610	0	0	0	0	0
NPCC—U.S.	0	392	0	0	0	0	0	0
SERC	1,092	0	857	2	0	0	0	0
SPP	992	640	97	0	0	0	0	0
WSCC—U.S.	820	1,120	2,761	0	0	0	0	736
NERC—U.S.	3,299	5,631	4,742	363	0	0	0	736
MAPP—Canada	36	0	240	0	0	0	0	0
NPCC—Canada	187	751	0	1,831	0	0	0	0
WSCC—Canada	1,055	0	1,263	0	0	0	0	0
NERC—Total	4,597	6,382	6,245	2,194	0	0	0	736

Subregional: Transmission Lines — Miles

TABLE 33S

UNDER CONSTRUCTION, COMMITTED OR PLANNED (1987-91)

VOLTAGE (kV)

Subregion	HVAC				HVDC[a]			
	230	345	500	765	500-600	800	900	1000
Cmwlth Ed.	0	18	0	0	0	0	0	0
Missouri	0	0	0	0	0	0	0	0
So. Cent. Ill.	0	127	0	0	0	0	0	0
WUMS	0	173	0	0	0	0	0	0
MAIN	0	318	0	0	0	0	0	0
New York	0	129	0	0	0	0	0	0
New England	0	263	0	0	0	0	0	0
NPCC—U.S.	0	392	0	0	0	0	0	0
New Brunswick	0	348	0	0	0	0	0	0
Ontario	0	0	0	0	0	0	0	0
Québec	187	403[d]	0	1,831[e]	0	0	0	0
NPCC—Canada	187	751	0	1,831	0	0	0	0
Florida	152	0	143	0	0	0	0	0
Southern	602	0	303	0	0	0	0	0
TVA	0	0	269	2	0	0	0	0
VACAR	338	0	142	0	0	0	0	0
SERC	1,092	0	857	2	0	0	0	0
Group A	504	56	97	0	0	0	0	0
Group B	350	288	0	0	0	0	0	0
Group C	138	296	0	0	0	0	0	0
SPP	992	640	97	0	0	0	0	0
NWPP—U.S.	164	48	726	0	0	0	0	0
RMPA	489	475	0	0	0	0	0	0
AZ-NM	194	455	13	0	0	0	0	240
CA-NV	-27	142	2,022	0	0	0	0	496
WSCC—U.S.	820	1,120	2,761	0	0	0	0	736

Regional: Transmission Lines — Miles

TABLE 34

TOTAL: EXISTING, UNDER CONSTRUCTION, COMMITTED OR PLANNED (12/31/91)

Region	VOLTAGE (kV) HVAC 230	345	500	765	HVDC [a] 500-600	800	900	1000
ECAR	1,162	12,863	1,213	2,448	0	0	0	0
ERCOT	0	8,735	0	0	153	0	0	0
MAAC	5,131	170	1,786	0	36	0	0	0
MAIN	259	5,523	0	90	0	0	0	0
MAPP—U.S.	7,240	6,028	951	0	463	436	0	0
NPCC—U.S.	1,534	4,763	5	315	0	0	0	0
SERC	20,322	2	8,011	3	0	0	0	0
SPP	5,837	5,172	2,285	0	0	0	0	0
WSCC—U.S.	31,845	10,913	14,154	0	0	0	0	2,099
NERC—U.S.	73,330	54,169	28,405	2,855	652	436	0	2,099
MAPP—Canada	4,365	0	370	0	0	0	557	582
NPCC—Canada	11,078	5,247	1,416	7,586	0	44	0	0
WSCC—Canada [b]	6,721	321	5,043	0	0	0	0	0
NERC—Total	95,494	59,737	35,234	10,441	652	480	557	2,681

Subregional: Transmission Lines — Miles

TABLE 34S

TOTAL: EXISTING, UNDER CONSTRUCTION, COMMITTED OR PLANNED (12/31/91)

Subregion	VOLTAGE (kV) HVAC 230	HVAC 345	HVAC 500	HVAC 765	HVDC [a] 500-600	HVDC [a] 800	HVDC [a] 900	HVDC [a] 1000
Cmwlth Ed.	0	2,464	0	90	0	0	0	0
Missouri	89	893	0	0	0	0	0	0
So. Cent. Ill.	47	1,076	0	0	0	0	0	0
WUMS	123	1,090	0	0	0	0	0	0
MAIN	259	5,523	0	90	0	0	0	0
New York	1,090	2,698	5	318	0	0	0	0
New England	444	2,065	0	0	0	0	0	0
NPCC—U.S.	1,534	4,763	5	318	0	0	0	0
New Brunswick	323	951	0	0	0	0	0	0
Ontario	8,107	5	1,416	0	0	0	0	0
Québec	2,648	4,291	0	7,586	0	44	0	0
NPCC—Canada	11,078	5,247	1,416	7,586	0	44	0	0
Florida	4,536	0	1,335	0	0	0	0	0
Southern	6,726	0	1,991	0	0	0	0	0
TVA	30	2	2,657	2	0	0	0	0
VACAR	9,030	0	2,028	0	0	0	0	0
SERC	20,322	2	8,011	2	0	0	0	0
Group A	3,145	165	2,103	0	0	0	0	0
Group B	1,694	2,366	47	0	0	0	0	0
Group C	998	2,641	55	0	0	0	0	0
SPP	5,837	5,172	2,205	0	0	0	0	0
NWPP—U.S.	12,182	3,519	6,485	0	0	0	0	264
RMPA	4,735	1,827	0	0	0	0	0	0
AZ–NM	2,534	4,348	1,883	0	0	0	0	240
CA–NV	12,394	1,219	5,786	0	0	0	0	1,595
WSCC—U.S.	31,845	10,913	14,154	0	0	0	0	2,099

Footnotes

a/ Reported as the sum of the plus and minus voltage magnitudes; i.e., ±250 kVDC is reported as 500 kVDC.

b/ The Canadian systems of the Northwest Power Pool Area also report 47 miles of both 260 kVDC and 280 kVDC.

c/ Only 96.4 miles energized at 765 kV.

d/ Category includes 315 kV.

e/ Category includes 735 kV.